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1. Accessibility maturity of TEL in UK HE: JISC TechDis lifts the lid on a decade of progress

Dr Shirley Evans, JISC TechDis
Dr Simon Ball, JISC TechDis

Abstract

JISC TechDis developed an Accessibility Maturity Model to highlight the stages of development that different institutions were exhibiting. Key stakeholders can recognise their role in embedding accessibility. This helps support disabled students, increases quality and flexibility of provision and reduces the risk of litigation.

JISC TechDis has reflected on the development of inclusive practice in education institutions and aligned the key stages of this development with the Accessibility Maturity Model. It has also considered these two aspects in a changing political and economic climate and reflects on how far the sector has travelled in terms of inclusive practice and how far it has to go. At the time less than 4% of students in HE were disabled.

JISC TechDis was formed in 2001 to lead the sector into realising that an inclusive mainstream was the only way to embed accessibility. With an economic downturn and changing political agendas the sector has focused on partnership working and capacity building as an organisation and with its service users. The Online Accessibility Self-Evaluation Service was launched to help stakeholders measure and address their accessibility maturity.

In 2012 between 8 and 10% students are disabled. Some institutions have grown in accessibility maturity and there are many pockets of good and embedded practice operating at the partnership level. JISC TechDis strategic priorities include the digital inclusion agenda, FOSS and working with Government departments on accessibility, assistive technology and employability. At the same time the service will continue to work as part of JISC Advance in helping the education sector and beyond to get the most from information technology and staff in an ever changing landscape.

Introduction

JISC Techdis is the leading UK advisory service on accessibility and inclusion and is financed by the UK funding councils for further and higher education to provide advice and guidance on accessibility and inclusion through technology at no charge. JISC Techdis was created to provide inspiration and advice to support the innovative use of technology within the education, business and community sectors.

The Service set out with a vision to see accessibility embedded in the HE sector. At that time, 2001, less than 4% of students in HE were disabled. The number of disabled students is increasing year on year and in 2011 is around 8% that is, 200,000 students (HESA, 2012).

In this paper there will be a consideration of the need for accessibility maturity and how it aligns with organisational e-maturity. The development of the Accessibility Maturity Model will be described and the model will be aligned with ways in which JISC TechDis has supported the sector. The On-line Accessibility Self Evaluation Service (OASES) will then be introduced as this is a means by which an organisation can benchmark their accessibility maturity. Three examples will then be set out as a means of illustrating how JISC TechDis has evolved to meet and to help shape the changing environment. Finally there will be a consideration of the accessibility journey, the current situation and how far there is to go to meet the original vision of accessibility being embedded in the HE sector.

The Accessibility Maturity Model

The traditional way to meet the needs of disabled students is to provide support over the barriers of traditional teaching and learning. A more sustainable approach is to reduce the barriers at source.
Research (JISC TechDis, 2009) showed that an inclusive culture can be most effectively implemented when there is coherence across different institutional policies. Therefore there needs to be a shift from policies that create and accommodate specific support for disabled people (to help them overcome institutional barriers) to policies that focus on reducing the institutional barriers in the first place and making mainstream provision and activities more accessible. A focus on reducing barriers requires a more strategic approach in which senior managers are the critical stakeholder since only they can ensure strategies are both joined up and pragmatic, involving practice as well as aspiration.

The Accessibility Maturity Model, figure 1 below, describes the different institutional approaches to accessibility derived from the research.

![Accessibility Maturity Model](image)

**Figure 1 - The Accessibility Maturity Model**

The ‘Luck’ stage of development was commonplace prior to the 1995 UK Disability Discrimination Act (DDA), now subsumed under the Equality Act 2010, and can be evidenced by the relatively small number of disabled students in UK higher education at that time. Following the introduction of the DDA, many institutions moved to a ‘Tokenistic’ approach, providing generic alternatives for some disabled users but showing no subtlety or understanding of user need. Data from the pilot OASES projects suggested many UK institutions were still at the ‘Specialism’ stage. Students who declare a disability are provided with a range of support services, but this is usually at the expense of mainstream awareness and flexibility. Many institutions are moving to a ‘Standards’ approach, where accessibility measures are implemented against objective checklists rather than focusing on meeting user need. This approach may prove counter-productive since insisting on all resources being fully accessible means the value-added potential of partially accessible resources for specific users is lost.

The most accessible institutions in the UK are now embedding the ‘Ownership’ level of maturity where all staff, whatever their role are being encouraged to consider their responsibilities in terms of accessibility, and mainstream teaching is being redesigned to accommodate as many user needs as possible. Some institutions are developing a ‘Partnership’ level of maturity with disabled staff and students advising senior managers in developing key policies, and with those policies in turn embedding a culture of delivering fully inclusive mainstream education with barriers reduced at source.

**The On-line Accessibility Self Assessment Tool**

A short, online, role-focused self-evaluation exercise which would allow anonymous benchmarking against other institutions was developed as a means of gauging accessibility maturity. This became known as the On-line Accessibility Self-Assessment Tool (OASES).

The OASES tool is designed to move institutions towards the more mature (right-hand) side of the Accessibility Maturity Model by empowering key stakeholders who undertake the survey to recognise their role in embedding accessibility. This helps support disabled students, increases quality and flexibility of provision and reduces the risk of litigation.
Accessibility should be embedded in the culture of an organisation rather than the enthusiasm of an individual or a team. The 2009 research helped to identify six roles as being key to identifying accessibility maturity:

- Library and Learning Resource Staff;
- Marketing Personnel;
- Network Managers;
- Disability Support and Additional Learning Support Staff;
- Learning technologies and Staff Developers;
- Senior Managers.

As the concept of e-maturity gains traction in UK education and online self-assessment becomes a recognised quality assurance process, the role of tools like OASES becomes increasingly important at providing a reality check that is simultaneously able to signpost practical ways of embedding accessibility. Mature accessibility practice is good for all users, not just disabled ones.

The JISC TechDis 2011 OASES Award for Institutional Progress on Equality using Technology has enabled the discovery, celebration and sharing of the excellent practice that is taking place across the education sector. Two of the winning six organisations were from the HE sector. JISC TechDis is planning to run the award again in 2013.

A decade of progress

Table 1 below sets out various stages in the development of JISC TechDis alongside the ways in which the service has been supporting the sector and aligning this with the stages of e-maturity across the sector as set out above.

<table>
<thead>
<tr>
<th>Year</th>
<th>Ways JISC TechDis supports sector</th>
<th>Stages of E-Maturity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999 - 2001</td>
<td>Pre-Techdis project focusing on exploiting IT for everyone – research outputs;</td>
<td>Luck</td>
</tr>
<tr>
<td>2001-2004</td>
<td>TechDis – accessibility project becomes a service with wider remit; Accessible Curricula; Access All Areas; workshops in York;</td>
<td>Tokenism</td>
</tr>
<tr>
<td>2004-2005</td>
<td>JISC TechDis – new funding, new remit; new publications; staff packs; workshops round the country.</td>
<td>Specialism</td>
</tr>
<tr>
<td>2006-2010</td>
<td>Accessibility for mainstream; Senior management briefings; HEAT; KickStart; Innovation; In-Folio; Go Mobile; Xerte; Free and portable apps.</td>
<td>Standards</td>
</tr>
<tr>
<td>2007-2012</td>
<td>Accessibility Maturity Model, OASES, FOSS; Publishers and alternative formats; E-books.</td>
<td>Ownership</td>
</tr>
<tr>
<td>2010 - Onwards</td>
<td>Toolbox; The Voice; SBRI; OER; Digital Literacy; Assessment; European Engagement; Strategic agenda.</td>
<td>Partnership</td>
</tr>
</tbody>
</table>

Table 1 – ways in which JISC TechDis have supported the sector and relationship to the Accessibility Maturity Model.

As can be seen from the table JISC TechDis has evolved from being a project to a fully-fledged service. The nature of the service and its products has changed to meet economic and political drivers alongside rapid technical innovation all of which have influenced the needs and expectations of institutions, staff and most importantly the students. Institutions have developed in terms of accessibility maturity, growing from being largely at the luck stage to more being at the standards and ownership stage and some at the partnership stage.
In the following section there is an examination of three projects that JISC TechDis are currently driving forward and which are aimed at promoting an holistic approach to e-maturity.

**Recent developments**

In 2011, JISC TechDis entered into a formal partnership with the Department for Business Innovation & Skills\(^5\) (BIS) to ‘improve take up and understanding of assistive and mainstream technologies for the benefit of disabled and disadvantaged learners.’ JISC TechDis were commissioned to carry out three new project strands specifically to provide these learners with tools to understand and address their own access needs thereby becoming more independent. The strands are:-

- The Small Business Research Initiative\(^6\)
- The TechDis Voices\(^7\)
- The JISC TechDis Toolbox\(^8\)

**The Small Business Research Initiative**

The Small Business Research Initiative (SBRI) encourages technology solutions to specific public sector needs by inviting a broad range of companies to bid for funding provided by the Department for Business Innovation and Skills (BIS) and the Technology Strategy Board.

JISC TechDis promoted and managed two competitions specifically aimed at exploring and developing assistive technologies to support independent learning, working and living.

**Making Waves**

According to the charity I Can “1 in 10 children in the UK, 2 or 3 in every classroom have communication difficulties that require specialist help,” (2012). Later in life communication difficulties may be acquired through accident, stroke, multiple sclerosis and many other disabilities.

Making Waves looked at converting gesture (or sign) language into digital data. Converting gestures into text or audio output enables learners to communicate with other people. In addition, conversion to electronic command signals means that those with limited motor control can gain greater independence.

**Plain Sailing**

The Right to Read alliance estimates that one in eight people have print impairments. Three million people in the UK are being denied the right to read on a daily basis just because they have a sight problem or reading difficulty (RNIB, 2012). There are many more for whom English is not their first language who would benefit from text and digital information being read out aloud to aid understanding.

Plain Sailing focused on helping users to access, view, comprehend and navigate digital information independently and successfully. These champion the use of freely accessible Open Source software packages which can run on the latest technology platforms and give users a personal, customised portal.

Phase 1 ran from April to October 2011 when seven companies were funded to develop ‘proof of concept as part of a feasibility study. Four projects then went on to Phase 2 projects where they were funded further to commercialise and market their products. These projects are due for completion in January 2013 (Plain Sailing) and June 2013 (Making Waves). A brief overview of each of these four projects is set out below:-

**MyDocStore\(^9\) – iansyst**

This innovative concept addresses the missing link in creating and transferring accessible files between platforms. MyDocStore aims to make it quick and easy to transfer files between devices whilst simultaneously converting them into the user’s preferred format -whether text, audio or a combination of both. This service will not only benefit learners who experience difficulty with reading due to a disability such as dyslexia, visual impairment or a physical disability, but also those who want to read documents or content when on the move.
Navitext\textsuperscript{10} - System Associates

This project aims to provide improved navigation and accessibility to books and documents for people who are visually impaired. It is almost impossible to scan or speed read reference books and scholarly texts if you are reliant on magnifiers or screen readers. Navitext aims to change that. The application identifies key navigation points in a text and provides easy ways of moving through it and finding what is needed.

uKinect\textsuperscript{11} – GameLabUK

Using Microsoft Kinect technology, GameLabUK are developing an interactive gesture recognition programme for people with learning difficulties and their carers. Users can improve their Makaton sign language skills in a fun and engaging way.

Portable Sign Language Translator\textsuperscript{12} (PSLT) – Technabling

The PSLT will enable signers to communicate with non-signers by translating their signs into text. It is portable, flexible and customisable so it can accommodate a range of different sign languages and work with a wide variety of handheld camera enabled devices such as smartphones. The first two projects are due to complete in January 2013 whereas uKinect and the PSLT will be available in July 2013.

The Small Business Research Initiative (SBRI) is run by the Technology Strategy Board and funded by the Department for Business Innovation and Skills (BIS).

The TechDis Voices

Text-to-speech (TTS) technology tools allow a reader to listen to text on the screen or exported as an MP3 file that they can listen to on any portable device at their leisure. These technologies can benefit many disabled learners including people with visual difficulties, learning difficulties, motor difficulties (who may find it hard to turn pages and hold books) and people with dyslexia. Text-to-speech can help ESOL (English for Speakers of Other Languages) learners whose aural English skills may far exceed their familiarity with Roman script. However in many educational institutions it is perceived as a niche disability tool only available on certain machines to support certain learners who have declared disabilities.

JISC TechDis recognised that a high quality synthetic voice licensed for wide educational use could transform the uptake of text to speech by:

- empowering educational establishments to provide a free high quality voice integrated into freely available text to speech tools such as DSpeech, Balabolka and WordTalk;
- adding value to other open source organisational tools such as Xerte (TTS enabled content creation tool) and In-folio (TTS enabled evidence collection). Such tools have text to speech functionality but rely on the default operating system voices;
- improving productivity by encouraging users to convert documents to audio format for listening and learning at times and places more suited to their needs.

The TechDis Voices give every post 16 learner in every publicly funded learning provider in England the chance to support their studies with tools that are often beyond the budgets of small and medium sized providers. Working with Cereproc, JISC TechDis created two bespoke voices, Jack and Jess, which were designed from the start to be young, student-friendly voices. Hundreds of learners across the UK were involved in choosing two voice actors from an initial cast of 14. The voices can be installed on a network, downloaded to staff PCs and even obtained directly by the learners themselves.

The TechDis Toolbox

The JISC TechDis Toolbox is a collection of resources which give useful hints and tips on technologies that can help individuals work smarter, quicker and more efficiently. JISC TechDis has a history of providing simple easy-to-use resources for tutors and lecturers. Here we have shifted our focus and Toolbox is aimed directly at the end users, the students themselves.
While written primarily for those with disabilities or difficulties, it is useful for just about anyone who wants to gain or improve on the skills most valued by employers. It explores many common workplace technologies (such as Microsoft Office and Google) and explains how to get the most out of them. It also suggests different tools for different needs, for instance, those with a visual impairment may find screen magnifiers or text-to-speech tools useful. Individuals with dyslexia or memory problems are advised to use task lists, calendars and reminders.

The contents of the Toolbox were determined via feedback from groups of former students who were asked “what should your tutor have told you but never did?” These small bits of just-in-time information can be easily understood and absorbed allowing users to learn something new and put it into practice straight away. Most people use technology every day. Using it smarter can help people be more productive, organised and creative.

Conclusion

Looking back to 1999 the purpose of the pre-TechDis project was to facilitate the exploitation of computing and information technology for everyone in the higher education sector. “Our philosophy is to see that accessibility is embedded in the sector.”

From that point the Service has travelled and grown with the sector through the various stages of Accessibility Maturity arriving in 2012 with a number of institutions at the Partnership Stage (“a range of learners – including disabled learners – work with the developers and teaching staff to discuss/develop good practice”). This can be exemplified via initiatives such as the OASES award and government funded projects such as SBRI, the TechDis Voices and the TechDis Toolbox.

Where institutions are not quite at the Partnership stage many are at the ownership stage (“staff are trained to be flexible, creative and adaptable with simple e-learning approaches”). This can be exemplified by the high level of attendance at webinars such as TechDis Tuesdays, Xerte Fridays and downloads of publications such as Accessibility Essentials.

It is expected that the number of disabled students in HE will continue to increase year on year. JISC TechDis has a vision for 2020 that all providers will have reached the Partnership Stage then accessibility may truly be said to be embedded and that in terms of accessibility maturity the sector has come of age.
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Biographies

Shirley Evans is Special Projects Officer at JISC TechDis. Shirley has worked in the field of education, technology and inclusion for the last 14 years on a local, regional, national and international basis and as a student, practitioner, senior manager and policy shaper. This work has cut across HE, FE, Independent Specialist Colleges and a range of national organisations. Her current research interests are in the field of social networking and e-Safety.

Email: shirley.evans@heacademy.ac.uk
Web: www.jisctechdis.ac.uk

Simon Ball is Senior Advisor at JISC TechDis, delivering advice and guidance to the UK education sector on inclusive use of technology. His interests include accessible e-learning and e-assessment, organisational approaches to inclusion, and the use of virtual worlds to benefit disabled learners. Simon is currently on part-time secondment to EIFL as a Free and Open Source Software Programme Manager.

Email: simon.ball@heacademy.ac.uk
Web: www.jisctechdis.ac.uk
www.jisctechdis.ac.uk


www.jisctechdis.ac.uk/oases

http://www.jisctechdis.ac.uk/techdis/pages/detail/floating_pages/OASES_award

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http://www.mydocstore.org.uk/


http://www.gamelabuk.com/?page_id=592

http://www.pslt.org/
2. Are learner perceptions of digital literacy skills teaching affected by demographic factors?

Marion Hall, Open University
Ingrid Nix, Open University
Kirsty Baker, Open University

Abstract
It is becoming increasingly important for learners to develop digital literacy skills (defined by the European Commission as the confident and critical use of ICT for work, leisure, learning and communication). The Quality Assurance Agency for Higher Education requires graduates to demonstrate digital literacy and employers demand these vital employability skills. And, with the rising cost of university education, learners themselves increasingly expect courses to demonstrate relevance to the workplace. Despite this, learners may not fully engage in skills development, giving priority instead to subject-specific learning. We therefore explore learner experiences of digital literacy skills development in an attempt to understand why learners fail to perceive the relevance of the skills content of their module, or at least give it low priority. The Open University’s Faculty of Health & Social Care (FH&SC) has evolved different approaches to digital skills development using technology-enhanced learning, based on skills resources that are either ‘generic’ (usable within any FH&SC module) or context-dependent and module-specific. Our Evaluating Approaches to Developing Digital Literacy Skills (EADLDS) project is exploring learner perceptions of skills activities and our overall skills development strategy, with data collected from online questionnaires and interviews involving learners from three modules. We present findings from analysis of some of the quantitative questionnaire data in relation to three demographic factors: age, gender and previous educational level. We consider to what extent learners’ engagement in and/or perceptions of skills development correlate with demographic factors. We also explore whether demographic factors are related to learner preferences for the type of learning design, for example, use of generic resources versus contextualisation of skills activities that emphasises relevance to the subject and/or the workplace. Our aim is to identify what demographic factors, if any, need to be considered in learning design to support individual learners appropriately, and thereby optimise engagement.

1. Introduction

Digital literacy is defined by the European Commission as ‘confident and critical use of ICT [information and communication technology] for work, leisure, learning and communication’ (JISC, 2012). The ability to demonstrate digital literacy skills is an essential element of ‘graduateness’, demanded both by the UK Quality Assurance Agency for Higher Education and by employers. Recent changes in Government funding for UK Higher Education mean that the personal cost to the learner is rising dramatically and, as a result, learners themselves increasingly expect university courses to demonstrate relevance to the workplace. But despite all this, some learners may not fully engage in digital literacy skills development, instead giving priority to the subject-specific content of their modules. As part of the Evaluating Approaches to Developing Digital Literacy Skills (EADLDS) project, we are therefore evaluating student perceptions of their digital skills development and the relevance of digital literacy to themselves and their employers, investigating what motivates their engagement and identifying features of learning design that facilitate engagement and skills development.

2. Background and Methods

The Open University (OU) is a distance-learning institution. It has always taken a blended learning approach and has been in the vanguard of using technology-enhanced materials to deliver high-quality learning. A certain level of digital literacy is needed now simply to study with the OU.

For the purposes of this study we divide digital literacy into:

- Information literacy (IL), defined as the ability to find and make use of information, including searching for, evaluating and referencing information.
- Information and communication technology (ICT) skills, defined as the skills drawn on to organise, present or share information using a computer, by means of, for example, word processing, spreadsheets, email and presentation software.
IL skills fall within the general qualification requirements of all OU degrees. At present, not all OU degrees require students to specifically demonstrate ICT skills.

Data were collected from students taking three modules in the Faculty of Health & Social Care (FH&SC):

- SW1 – a Level 1 (equivalent to first year undergraduate) social work module
- SW2 – a Level 2 (equivalent to second year undergraduate) social work module
- HSC2 – a Level 2 health and social care module.

In each of the three modules, students are introduced to a task requiring digital literacy skills in the learning guide for the module. They are then directed to skills guidance, provided in one of two ways:

- Generic – a skills activity, provided via the HSC Resource Bank (HSCRB), an online, web-based, faculty repository of resources that can be used by any FH&SC module.
- Contextualised – module- and context-specific skills guidance provided as a PDF document on the module website.

The guidance in SW1 and SW2 is contextualised within social work. In HSC2 students are provided with a direct link to the relevant HSCRB generic skills activity from the module learning guide.

A mixed methods approach was used for data collection. All students were offered the opportunity to complete a reflective activity towards the end of each of the three modules. The activity was in the form of a questionnaire and enabled students to reflect on their skills development and to evaluate particular skills activities. Some questions required fixed-choice responses and provided quantitative data while others allowed free-text entry and so provided qualitative data. Separate questions were asked about ICT and IL skills.

In this paper we focus on the following aspects of student perceptions about digital literacy skills:

- Preferences in relation to generic versus contextualised skills.
- Preferences in relation to the location of skills guidance, i.e. whether it is provided within the module or separately from it.
- Preferences in relation to the timing of skills guidance, i.e. whether it is provided at the point of need or at a time when the learner decides.
- Perceptions of the value of skills to themselves.
- Perceptions of the value of skills to their employer.

Data from all modules are combined for the analysis. Comparisons are made in relation to three demographic factors: gender, age and level of previous educational qualifications (PEQs) before joining the OU. Lower PEQs are those students who have obtained qualifications up to and including UK A-levels or equivalent. Higher PEQs are those students who have obtained qualifications from Further or Higher Education.
For each demographic factor, students are divided into groups for comparison as follows (not all items of demographic information are available for every student and N values reflect this):

- Gender: men (N=44) and women (N=249)
- Age: 35 or under (N=91), 36 to 45 (N=106), and 46 or over (N=96)
- PEQs: lower PEQs (N=105) and higher PEQs (N=109)

All differences between demographic groups, and between IL and ICT skills, are tested for significance using $\chi^2$ tests.

3. Results

3.1 Questionnaire submission rates

A total of 298 students completed the questionnaire, representing 23.0% of all the students studying the three modules.

3.2 Generic versus contextualised skills activities

Student responses to the following statements about generic and contextualised skills activities are shown in Figure 1 (the statements have been abbreviated within this and other figures).

Statement 1: I am happy to complete a ‘generic’ skills activity (one not specifically related to the module or to my work) because I can work out what its relevance is to me.

Statement 2: I prefer skills activities set in the context of study or work, and built into the content of the module, rather than presented as something separate.

Statement 3: I am more likely to do a skills activity if it is set in a context that is relevant to the module.

Statement 4: I am more likely to do a skills activity if it is set in a context that is relevant at work.

![Generic vs contextualised skills - all modules](image_url)

Figure 1: Student perceptions of generic skills activities compared with contextualised ones.
Less than 20% of students are unhappy about working on generic skills activities. However responses to statements 2-4 show that they have a strong preference for skills set in the context of the module and related to study or to work, and that they are more likely to complete a skills activity if it is contextualised, especially if it is set in a module context.

There are no significant differences between any demographic groups.

3.3 Location and timing of skills activities

Student responses to the following statements about skills activities that are integrated into or separate from the module are shown in Figure 2.

Statement 5: I am more likely to do a skills activity if it is made available at the exact point in the module that I need the relevant skill.

Statement 6: I prefer to decide for myself at which point to do skills activities.

Statement 7: I am more likely to do skills activities if they are made available as part of a separate set of resources that I can access when I want to.

![Location and timing of skills - all modules](image)

**Figure 2: Student perceptions of skills activities integrated into or separate from the module.**

A large majority of students (over 70%) are more likely to do a skills activity if it is provided in the module at the point of need. Only a minority of students (less than 30%) prefer to decide for themselves when to do a skills activity or are more likely to do a skills activity if it is provided separately from the module.

There are no significant differences between demographic groups except for statement 7. Men are significantly more likely than women ($\chi^2=13.69$, df=4, p<0.01) to do a skills activity if it is provided separately from the module (Figure 3).
More likely to do skills activity if separate and can access when want

Figure 3: Responses of men and women to statement 7.

3.4 Value of skills to the student

Student responses to the following statements about the extent to which students believe they will be able to use the IL and ICT skills they have developed in the future are shown in Figure 4.

Statement 8: How much do you feel you will be able to use the IL (finding and using information) skills that you've developed by studying this module in employment?

Statement 9: How much do you feel you will be able to use the IL (finding and using information) skills that you've developed by studying this module in future study?

Statement 10: How much do you feel you will be able to use the IL (finding and using information) skills that you've developed by studying this module in activities outside employment and study?

Statement 11: How much do you feel you will be able to use the ICT (computing) skills that you've developed by studying this module in employment?

Statement 12: How much do you feel you will be able to use the ICT (computing) skills that you've developed by studying this module in future study?

Statement 13: How much do you feel you will be able to use the ICT (computing) skills that you've developed by studying this module in activities outside employment and study?
A large majority of students think they will be able to use their digital literacy skills in their employment (over 90%), future study (almost 100%) and personal life (at least 80%).

There are no significant differences between demographic groups except for statements 8 and 11. Students with higher PEQs are more likely than those with lower PEQs to believe they will be able to use both IL skills ($\chi^2=14.34, \text{df}=2, \ p<0.001$) and ICT skills ($\chi^2=10.95, \text{df}=2, \ p<0.01$) in employment (Figures 5 and 6).
3.5 Value of skills to employers

Student responses to the following statements about the extent to which students believe their skills are seen by employers as important are shown in Figure 7.

Statement 14: How important to your current or future employer do you think the IL skills are that you’ve developed by studying this module?

Statement 15: How important to your current or future employer do you think the ICT skills are that you’ve developed by studying this module?

Figure 7: Student perceptions of the importance employers attach to skills.

Only a very small minority of students (less than 10%) believe that employers think that digital literacy skills are not important. Students are significantly more likely to believe that ICT skills are important to employers than they are IL skills ($\chi^2=16.93$, df=3, p<0.001).

There are no significant differences between demographic groups.
4. Discussion

Most of the learners studying the three modules believe that digital skills are important and that they can transfer these skills from the module to all areas of their life. Digital literacy skills, particularly ICT skills, are considered of great importance to employers.

The majority of learners prefer to learn skills in the context of their subject and they like to be able to access skills guidance at the point that they need it. The same preferences have been identified in a separate analysis of the qualitative data from this study by Nix, Hall & Baker (2012). Evidence that learning is more effective when skills development is integrated into the curriculum is provided by several studies (e.g. Beetham, McGill and Littlejohn, 2009; Kingsley and Kingsley, 2009).

For the aspects of students views considered here, there are no differences between age groups. According to Prensky’s (2001) original definition as those born after about 1980, the youngest age group (35 or under) would be categorised as ‘digital natives’ who have grown up with digital technology. The two older groups on the other hand would be categorised as ‘digital immigrants’ whose first experience of digital technology came later in life. According to the concept of the digital native/digital immigrant divide, the youngest group would be expected to hold different attitudes to the two older groups, but our analysis provides no evidence for this. However, although the concept of the digital native may still be valid, there is increasing evidence that it is not necessarily linked to age (e.g. Helsper and Eynon, 2010). In any case, as Kumar (2010) amongst others has pointed out, digital natives may appear to be comfortable with technology, for example with the everyday use of mobile phones, Google, and social networking, but may not understand its use in an academic or professional setting.

In comparisons between men and women, we find only one difference. Men are more likely than women to do a skills activity if it is provided separately from the module. One possible explanation is that men like to have the option of doing an activity at a time that suits them. However, the fact that there is no difference between men and women in their preference for deciding for themselves when to do an activity implies that this is not the reason. One alternative explanation is that men are more highly motivated than women to do everything in their module thoroughly and, as a result, are more likely than women to make the effort necessary to do a separate skills activity. Our current analysis does not provide any data to support or disprove this explanation but we will be looking for possible evidence, and for alternative explanations, as we analyse our qualitative data further.

We find only one difference between students with different levels of previous educational qualifications: higher PEQs are more likely than lower PEQs to believe they will be able to use their digital literacy skills in their employment. There are three possible explanations we can think of for this. Firstly, higher PEQs may be more likely to have a technically demanding job for which the skills will be useful. Secondly, they may be less likely to find work tasks intimidating or have greater confidence in using their skills in the workplace. Thirdly, they may be better able to ‘transfer’ skills learned in a module context to other contexts, so are better at relating their skills to the workplace. However, there is no difference between higher PEQs and lower PEQs in the extent to which they think they will use their skills in the other contexts of future study and personal life, which implies that the third explanation is not correct. Further analysis of our quantitative and qualitative data may provide evidence for or against the first and/or second explanation, as well as further alternative explanations.

On the basis of our analysis so far, we conclude that, to maximise engagement with skills learning, digital skills development activities should be delivered in the context of the subject that the student is studying and provide skills guidance at the point of need. This caters for all the demographic groups we have considered here. As learning designers, we should also make it clear to students why digital literacy skills are important and useful, not only to the subject they are learning and/or to their professional practice, but to all areas of their life.

5. Acknowledgements

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References


Biography

Marion Hall (marion.hall@open.ac.uk) trained as a biologist. She joined the Science Faculty of the Open University in 1988, before moving to the Faculty of Health & Social Care as a Lecturer in Health and Social Care. She has been involved in developing e-learning materials since the early 1990s and currently works mainly on the development of digital literacy skills. See her website at http://www.open.ac.uk/personalpages/m.j.hall/index.html for further details.
3. “What do I need?” – evaluating learner perceptions of digital literacy skills development to inform enhancements to learning design

Ingrid Nix, Open University
Marion Hall, Open University
Kirsty Baker, Open University

Abstract
The ability to demonstrate digital literacy skills, defined by the European Commission as the confident and critical use of ICT for work, leisure, learning and communication, is a key requirement for graduates, demanded both by the UK Quality Assurance Agency for Higher Education and by employers. These skills enable learners in the current digital environment to engage effectively in study programmes, in the workplace and at home. The Open University’s Faculty of Health & Social Care (FH&SC), working closely with the OU Library, has evolved different approaches to digital literacy skills development using technology-enhanced learning and based on activities which are either ‘generic’ (usable by any FH&SC module) or are context-dependent and module-specific. The Evaluating Approaches to Developing Digital Literacy Skills (EADDLS) project explores learner perceptions of their digital literacy skills development in modules using different approaches, and considers the implications for learning design, including the pedagogical and resourcing implications of using generic versus customised activities. The project aims to identify design features which optimise learner engagement in skills activities, looking in particular at factors motivating learner engagement in skills development and at how design features (such as contextualisation of skills activities in terms of relevance to subject or working practice) influence learner perceptions and experiences of their skills development. This paper focuses on the initial analysis of qualitative data collected from interviews (n=18) across three modules. We reveal what skills learners value and why, and suggest features of learning design that may be important motivators. For example, learners with greater prior knowledge of a skill need to be able to easily identify which parts of an activity deal with skills they already have and which parts develop new skills.

1 Introduction
The ability to demonstrate digital literacy skills, defined by the European Commission as ‘confident and critical use of ICT [information and communication technology] for work, leisure, learning and communication’ (JISC, 2012) is a key requirement for graduates, demanded both by the UK Quality Assurance Agency for Higher Education and by employers. Despite the importance of digital literacy skills development, time-poor learners may not fully engage in such skills development, preferring instead to prioritise the subject-specific content of their modules. As learning designers we need to understand how to engage such learners to ensure they meet the qualification requirements. We are also interested in the pedagogical and resourcing implications of the chosen method of delivery. Activities customised so they are relevant to particular students may be more challenging to maintain and re-use than generic activities. As part of the Evaluating Approaches to Developing Digital Literacy Skills (EADDLS) project, we are therefore evaluating learner perceptions of their digital skills development, looking in particular at what motivates their engagement and how their experiences are influenced by features such as generic or context-specific information. We aim to identify features in learning design that facilitate engagement and therefore skills development.

2 Background
The Open University (OU) is a distance-learning institution and uses technology-enhanced learning to deliver ‘supported open learning’. Students to varying degrees therefore require digital literacy skills just to engage in OU studies. For this project we divide digital literacy into:
Information literacy (IL) - the ability to find and make use of information, including searching for, evaluating and referencing information.

Information and communication technology (ICT) skills - the skills drawn on to present or share information using a computer, for example, utilising word processing, spreadsheets, email and presentation software.

IL skills fall within the general requirements of all OU degrees. ICT skills are a qualification requirement for particular OU degrees. In the Faculty of Health & Social Care (FH&SC) these include the Social work (SW) degree and the Health and social care (HSC) degree. Data were collected from students on three modules in these degrees:

- SW1 – a Level 1 (equivalent to first year undergraduate) social work module
- SW2 – a Level 2 (equivalent to second year undergraduate) social work module
- HSC2 – a Level 2 health and social care module.

OU SW students are all mature students, currently employed, and usually sponsored by their employer. Sponsored students undertake practice learning opportunities (work placements), hence their studies need to relate to their work practices.

HSC2 students are generally mature students, usually employed, though mostly self-funded. HSC2 is a core module in the HSC degree, but also an optional module in other OU degrees. HSC2 is theory-based but the relationship between theory and practice is highlighted.

In these modules students are introduced to a task requiring digital literacy skills in the module learning guide. They are then directed to skills guidance, provided in one of two forms:

- Generic – a web-based skills activity located in the HSC Resource Bank (HSCRB), a faculty repository of resources that can be used by any FH&SC module.
- Contextualised – a PDF document on the module website, containing module- and context-specific skills guidance

The former is used by HSC2 students, who are provided with a link to the relevant HSCRB generic skills activity. The latter is used by SW1 and SW2 students, whose activities, where appropriate, are contextualised within social work.

SW1/SW2 students visit their module website to access a PDF document containing step-by-step guidance with screen captures and assessment related information. By working through this document students will produce the required (sometimes assessed) component. Less confident students can follow the guidance in detail. More confident students can skim the document for key information to achieve the task, as shown in Figure 1.
HSC2 students instead are given the option to visit the HSCRB repository holding generic skills activities. If already familiar with the necessary skill, they may decide to perform the module task without visiting the HSCRB. For less confident students the HSCRB activities include generic examples/data that students can use to practice the skill. However, where possible, the activities also allow students instead to use the examples/data that the module task requires them to use. In some activities, this only happens at certain points. For example, in an activity that shows students how to organise files into folders, they are given the opportunity at one point to customise a set of folders that will be useful for their module. In a few activities, however, students have the choice of using either the generic data throughout the activity, or the module data, or both (giving two stages for completing the module task). For example, in an activity that shows students how to use spreadsheets, they are supplied with a set of data they can use to complete the activity but also given the opportunity to import their own data set if they want to use that instead. So for these particular HSCRB activities, students may complete them twice (low confidence), skip the ‘generic’ practice stage (medium confidence), or skip the HSCRB activity completely (high confidence). This is illustrated in Figure 2.
3 Methods

A mixed methods approach was used for data collection. All students were offered the opportunity to complete a reflective quiz towards the end of their module inviting reflections on their skills development. A total of 298 students (representing 23%) submitted the quiz. (See Hall, Nix & Baker (2012) for an analysis of quantitative data from the quizzes.) When invited to participate in a follow-up interview at the end of the quiz, 123 students (9.5%) volunteered. We randomly selected 6 from each module (total 18 interviewees), but ensured that both sexes were represented where both volunteered.

Participants were interviewed face-to-face or by telephone using semi-structured interviews with questions that build on the quizzes. Interviews (approximately 1.5 hours) were audio-recorded and transcribed. For the first interview all three authors took part in order to standardise the approach, thereafter holding interviews alone or in pairs.

3.1 Approach for qualitative data analysis

The qualitative data from the interviews is being analysed using thematic analysis. To help manage the quantity of data we collected, the transcripts are being coded in NVivo software using a set of categories/nodes (Bazeley, 2007) agreed within the team. To maximise reliability of coding between team members, the first two transcripts were coded by all three researchers independently and checked for interpretation. Subsequent transcripts are being coded by one team member and checked by another.

4 Results

The following initial findings are based on the analysis of 3 of the 18 interviews, one from each module. The three anonymised participants are as follows.
Vicky (SW1, sponsored) is confident in her ICT skills and has a positive but reflective attitude to its use at home and at work. She comments that she can live without a television but not without a computer. According to Vicky, her line-manager is similarly disposed towards ICT whereas her colleagues either love or hate it and have difficulty keeping up with the organisation's many IT system changes.

Caroline (SW2, sponsored) has previously completed a Masters degree and enjoys studying. She is currently a Care manager but has wanted to be a social worker since she was 18. Although she did not enjoy her first degree at a traditional university, she likes the OU technology-enhanced learning approach with easy access to electronic information. However, she has always been sceptical about computers. At work she finds staff cannot cope with the quantity of information disseminated via email. Caroline acknowledges her own coping strategy is to skim read and she also applies this in her OU studies. Although Caroline is fairly confident using the internet at home, she considers herself not very computer literate. For example, she finds retrieving files within folder structures difficult.

Tracey (HSC2, self-funded) works as a secretary in a hospital. She was already confident in ICT skills, having independently completed the European Computer Driving License. However, she had only basic IL skills and depended mainly on Google. She feels her IL skills dramatically improved during the current module. Someone close to her recently developed a disease so she has been researching this online.

This background information reveals that confidence levels may vary across different aspects of their lives. It informs participants’ motivation for engagement and their evaluation of particular features.

4.1 Motivation

When asked what matters most about their skills development, Vicky wants the activities to help her develop existing skills which will make her life easier, either at work or at home. She does not want to develop skills which she may never need.

Tracey similarly is selective about activities. She is interested in new (not existing) skills. What matters is that the instructions are clear to carry out the tasks. Like Vicky, she is interested in time-saving techniques. She enjoys studying using fast internet connections to quickly achieve tasks. However, poor broadband services in her area affect her view of online features. She strongly favours printable resources rather than slow loading webpages.

What matters to Caroline is that her learning is at her own pace and support is available if needed. She tends to complete all the activities. Her satisfaction comes from ticking off all her studies as complete at the end of each week, and achieving all possible marks. Her view is that hard work pays off. She wants to see a clear rationale for what she is being asked to do or else she will challenge doing it.

4.2 View of skills strategy

It appears that the module and programme’s skills strategy was not always clear. Although Vicky (SW1) and Tracey (HSC2) found the rationale clear and took a pragmatic approach to engaging with the activities, Caroline (SW2) was unclear about the strategy. She thought the skills development had been covered at Level 1 and her anxieties caused her to deliberately skip reading strategy-related guidance. Tracey reported that some HSC2 students had not anticipated the extent of the ICT work required and some expressed (disruptive) anxieties. She felt more advance information should have been provided. The implication for educators is to regularly signpost skills strategy guidance within programmes and if possible to make this engaging.
4.3 Identifying parts to complete

Vicky finds skills activities a welcome break from the main module. She uses a variety of approaches to carefully select what parts of an activity to engage with. She wants to quickly identify what the activity covers and what is new or stimulating. She uses information in the title, introductory paragraph outlining the activity and the listed learning outcomes to get a sense of the level of the task. She jumps ahead to the end of the activity to gauge how stimulating it may be. Vicky found that sometimes she made false assumptions and dismissed an activity as too basic when actually it contained new information. For this reason her strategy includes browsing through the guidance to look for new or unexpected tips.

Tracey’s approach is simpler, she uses the activity title to gauge whether she already has the targeted skills. She clicks on links and browses the guidance to check what is covered. The drivers for her to complete an activity are the satisfaction of learning a new skill, completing the task, and marks (if assessed). If the first is not possible (either because the skill is familiar or because the guidance is not clear) she remarks she will skip the activity.

Because of Caroline’s fear of falling behind or failing the module if she skipped any activities, she methodically completes them all, though not necessarily in one sitting, and might postpone an activity if it appears uninteresting.

Vicky appears keenest to discover new tips and so has more complex techniques for locating these, whereas Caroline appears to have devised an approach by which she ensures she completes all the activities in full. Perceptions of choice are explored below.

4.4 Choice versus directed learning

A feature which Caroline finds helpful is skills activities integrated within the module. If these were separated out and not visible within the main module material, it would be too easy to skip them. Since she does not enjoy ICT, she does not trust herself to seek out any separate activities. Caroline follows the directed rather than a selective route, unlike Tracey and Vicky.

Tracey makes good use of the optionality her module offers to draw on HSCRB activities. She completes all the module tasks without always needing or completing the HSCRB activities. She does not complete them if she finds partway through that she already knows the skill. She finds it sometimes confusing to be sent to different places for resources, hence her favourable view of the social work integrated PDF activities when described to her. Asked how she might feel using this format if she were to come across information she is already familiar with, she takes a positive view of being able to recognise skills you already have, rather than considering the extra detail unnecessary.

Vicky points out the importance of personal choice in engaging her, and her desire to get to grips with a particular skill. When she encounters a challenging activity (such as working with bibliographic software), Vicky does not pursue it unless it is essential, especially if she already has an existing method.

It appears that optionality is welcomed by the more confident participants, enabling them to decide where to concentrate their efforts. However, putting temptation in their way to skip activities is not helpful for the less confident participant. The combination of integrated activities and a methodical attitude towards working through all activities ensures an approach which works for Caroline. Integrated activities do not present a problem to a confident learner who can fast-forward past what is familiar.

4.5 Useful features and possible enhancements

Participants commented on existing features of skills activities that they find useful and engaging, and suggested new features they feel would enhance their learning experience. This is summarised in Table 1.
<table>
<thead>
<tr>
<th>Type of feature</th>
<th>Existing feature perceived as useful and engaging</th>
<th>Suggestion for new/ improved feature to enhance experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicators of content</td>
<td>• Descriptive titles and introductions</td>
<td>• Hover/pop-up facility e.g. over an activity title, to reveal outline of its contents to quickly assess what to engage with</td>
</tr>
<tr>
<td></td>
<td>• Lists of learning outcomes, index lists, clickable menus</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• ‘Before’ and ‘after’ images at start of task to swiftly convey aims</td>
<td></td>
</tr>
<tr>
<td>Still screen captures</td>
<td>• To illustrate expected outputs</td>
<td>• More detailed illustrations of what outputs should look like</td>
</tr>
<tr>
<td></td>
<td>• To break up dense text</td>
<td></td>
</tr>
<tr>
<td>Video screen captures</td>
<td></td>
<td>• To illustrate processes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• To convey speed, efficiency, time-saving techniques</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• To provide audio instructions for a more supportive experience</td>
</tr>
<tr>
<td>Audio</td>
<td>• Audio podcasts useful for scenario setting, sense of ‘real world’ tasks</td>
<td>• Audio instructions added via commentary on video screen capture to provide more supportive experience</td>
</tr>
<tr>
<td>Printable resources</td>
<td>• Useful reference documents for self and colleagues/family</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Provide text-based alternatives (e.g. when broadband service poor)</td>
<td></td>
</tr>
<tr>
<td>Formatting</td>
<td>• Ability to scroll/browse</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Different stages of task clearly indicated using boxes or separate sections</td>
<td></td>
</tr>
</tbody>
</table>

4.6 Generic or subject-specific contexts

This figure illustrates the value participants attached to subject-specific versus generic context-giving information.
Caroline has a neutral view about context. She did not particularly enjoy the contextualisation within social work but thought on balance it was acceptable and should be retained. Nevertheless, she would be willing to engage in generic activities if integrated within the module and a clear rationale presented.

Tracey feels that if the skill only is intended to be the focus then a generic context is fine (as in the HSCRB). If the context is familiar (e.g. holiday expenses), then the skill can appear in focus. However, she would prefer the familiar context to be related to the module subject so that it maintains her train of thought on her module studies and makes it more meaningful. For this reason she believes module activities should use subject-specific contexts.

Vicky considers generic context acceptable for basic skills. However, she thinks more complex skills can best be developed using context and content that is already familiar and understood. This enables the learner to work out what the content should look like, for example, when transformed into a new format in a database or table. As Vicky experienced, when content is unfamiliar the guidance needs to provide a clear example as feedback.

Detailed feedback is only possible if students are working through the same data or example embedded in the activity (such as in a generic HSCRB or PDF activity). Tracey highlights that using this method the guidance can demonstrate the expected output and students can check their work matches this. All three interviewees noted this need. The disadvantage of the HSC2 approach is that students can only derive feedback from the generic HSCRB activity, and would have to deduce feedback on the module data themselves. The advantage of the SW approach is students receive detailed feedback within the PDF activity on the subject-specific example used. This may include completed examples from contexts outside the student’s comfort zone.

To summarise, if the aim is for the skill itself to be in focus, then a context separate to the module is acceptable. However, a subject-specific context is preferred. This supports students’ concentration on the main module learning and aids meaning-making, provided that the context and content is familiar.
5 Discussion and conclusions

As we have seen, factors within the participants’ immediate environment influence their engagement even before they view the learning designs themselves.

A previous study (see Thorpe and Edmunds, 2011) explored learner perceptions of the importance of fit between skills developed for study and for work practices. It highlighted that learners’ attitudes towards and take up of ICT may be positively or negatively influenced by the learners’ work context and by how central it is perceived to be to their work identity. Our findings agree with those from a separate analysis of quantitative data from this study (Hall, Nix & Baker, 2012) that learners consider digital literacy (especially ICT skills) of high importance in their work. Nonetheless, the participants’ self-reported confidence and competence varied in the different areas of leisure, study and work and revealed that confidence in using skills in one domain did not necessarily translate into confidence in using them in another. In our on-going data analysis we will be exploring this further.

In terms of awareness of the skills strategy, although two participants were clear and pragmatic about the module’s approach, one participant actively avoided the strategy-related guidance due to anxiety. It was also reported that lack of awareness by other students sometimes caused disruption. This highlights the challenge facing designers if they are to communicate a programme strategy effectively, as well as the need to do so regularly.

Regarding engagement with the learning activities, the two more confident participants were selective, and interested in finding new and time-saving techniques to enhance their existing practices. Their approaches reflected this focus. Visual features were important to allow them to glean key information, including feedback during an activity. Their reflections reveal that such feedback is particularly important for learners working independently, using their own contextual data, to enable them to work out the equivalent steps to carry out using the targeted skill. This initial finding is significant because it suggests that even more confident learners require materials that provide them with adequate support.

The less confident participant was motivated by marks and the personal satisfaction of completing tasks. Perhaps surprising, given her previous experience of post-graduate study, she completed all activities, rather than engaging selectively. Features she identified as important to motivate engagement focused on supportive devices to reduce the feeling of isolation. This included regular prompts to engage from clearly visible, integrated module activities and features such as visual, video and audio illustrations to give a sense of support and human presence.

Several studies indicate that skills development is more effective when integrated within the curriculum (e.g. Kingsley and Kingsley, 2009). In this case it appears that the visual and structural props afforded by integrated assessed activities supported this learner. Further analysis of the remaining interviews may reveal to what extent there is a link between low confidence and the need for a more audio-visually supportive framework. This clearly has resource implications.

Concerning the use of context, our quantitative data indicates students prefer and are more likely to complete a contextualised activity (Hall, Nix & Baker, 2012). Qualitative data has revealed reasons, such as the role this plays in helping learners maintain their focus on their module studies. Participants also revealed that when a context is familiar and content is understood, they can focus on learning or practicing a skill.

We suggest that the more unfamiliar the module material is to a student, the less capable they are of determining how it should fit into a skills activity if the skill is also new to them, unless the activity design can provide a high degree of explicit feedback.

Figure 4 illustrates how, when designing a task, the learning designer may need to manage the degree of challenge presented. This may involve considering the expected degree of familiarity of the learner with the targeted skill and activity content/context.
For instance, when introducing a new skill with which the student has low familiarity (see point 1 in Figure 4), in order to minimise challenge, designers should ideally draw on content covered earlier in the module (point A) rather than what is currently being covered in the module (point C). This ensures learners are familiar with it and are able to work out how to apply the skill to it.

A task which introduces a new skill as well as unfamiliar content might be prohibitively challenging, represented in Figure 4 by the solid (red) triangle. The area up to the (red) dashed line represents what might be acceptable.

Fluency in skills emerges after repeated practice but time-poor learners may be reluctant to engage in multiple practice attempts. Perhaps learners could be induced by using practice (point 2) with more recent, familiar module content (point B), and then further practice (point 3) with new and more challenging module content (point C)?

Based on our initial analysis the implication is that if both module content and the skill are new, then the student will need greater support, such as visual and other feedback to scaffold them and instil confidence. This suggests that the module data would need to be integrated within the guidance in order for detailed feedback to be possible.
To summarise, based on 3 of the 18 interviews and supported by our quantitative findings we conclude that to maximise engagement, digital literacy skills activities should be contextualised within the module context and be integrated rather than separate activities. We have proposed a framework for balancing the degree of challenge within an activity. As we analyse the remaining qualitative data we aim to identify further themes, patterns, and connections between quantitative and qualitative data, with a view to identifying further implications for designing and resourcing effective skills activities.

6 Acknowledgements
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7 References


Biography
Ingrid Nix (ingrid.nix@open.ac.uk) is Lecturer in Learning and Teaching Technologies in the Faculty of Health & Social Care at the Open University, UK. She works with module teams to develop and enhance learning and teaching. She leads programme-wide strategies for digital literacy skills development on the OU Social work degrees.
4. First Steps in Bridging the Gap between the Virtual Learning Environment and Social Media - Students Attitudes

Guy Saward*, Alan McCall†, Lynette Pye*, Samuel Nathan Richards*

* School of Computer Science, † School of Physics, Astronomy and Maths
University of Hertfordshire, Hatfield, UK

Abstract

Social media has a growing history of use within an educational context, for no other reason than the student sitting in a lecture theatre may be tweeting their friends on a smartphone. This paper describes some initial work on harnessing the power of social media to draw students into a virtual learning environment (VLE). The work has had two main halves with the first focussed on how students currently use social networks and whether they would “give permission” to have academic activities “marketed” to them using these channels. The second half looks at how RSS can be used as a basic mechanism to “plumb” the VLE into social networks so that students can be alerted to any new activity happening within the VLE, and the design principles required to ensure barriers are not put up between the VLE and social media.

Keywords: social networks, Facebook, Twitter, student engagement

1. Introduction

The eSCISM project aims to “enhance StudyNet Community Integration with Social Media” with the goal of bridging the divide between a student’s academic community of practice and their existing social networks. The project arose out of previous work on the characteristics of different Web 2.0 technologies [Saward 2010] and an informal debate as to how students would react to lecturers entering their online social spaces. While it was argued that increased exposure to lecturers as people could present engaging, positive role models, some felt that this would be generate a negative response [Madge et al, 2009] while others were wary of sharing personal information.

To see if students would value the use of social media for academic purposes, we undertook work to:

- understand students’ relative use of social media and their VLE;
- investigate students’ attitudes to mixing their academic and online social lives;
- pilot mechanisms for publishing VLE activities through online social networks.

Section 2 reports the results of our survey undertaken into social media usage and attitudes, while section 3 identifies differences seen across different groups of students. Section 4 describes both the design principles used in piloting social media – VLE integration and the mechanisms used. In conclusion we identify a number of areas for further work.
1.1 Current Use of Social Media
Before describing our approach it is worth discussing the distinction between social media and social networks – two terms with arguably different meanings [Miller, 2011]. This serves to frame our focus on communication, i.e. interaction with students, rather than content as well as defining the boundary of our survey.

The distinction between social media as communication channel or as content can be seen in different uses of the term social media. In the first interpretation social media is seen as an extension of traditional, i.e. mass broadcast, media. In "new" media the social element is introduced by using the connections between individuals in an online social network as a means of delivering content. General Motors use of Facebook and subsequent withdrawal [Popelka, 2012] is a prime example of this broadcast use of a social network. Similarly, Kwak et al’s [2010] claim that relationships between Twitter’s users do not match the “known characteristics of human social networks” implicitly supports the position that Twitter is more (social) news media rather than social network.

Taking the second interpretation and equating social media with (user generated) content [OED] suggests the possibility of social media without a social network. For example, while YouTube is listed as the third most popular global site for social media [Alexa, 2011] it does not rely on an online social network of linked individuals for the dissemination or discussion of content. However, this view of social media as orthogonal to social networks is at odds with other views of social networks as a subset of social media [Kaplan and Haenlein, 2010].

Based on our initial interest in communication rather than content, the networks selected for inclusion in the survey were taken from data on the top four most used social media networks at the time [Kallas, 2011]. However, the content focussed YouTube was replaced with the recently launched Google+.

2. Student Survey on Use and Attitudes to Social Media
To understand our students’ use of social media (more accurately labelled social networks) and their attitude to its academic use, we undertook a short survey. This consisted of 18 items broken down into three main groups including:

- social networking use, including total activity and relative use different services and devices;
- VLE use, both in general and for interpersonal interaction;
- Attitude to receiving VLE updates through social networks.

The survey was initially administered face-to-face to two cohorts, totalling 59 students, taking third year (level 6) undergraduate modules in the School of Computer Science. The students varied in background and were studying programmes that included Computer Science, Information Technology and Joint Honour, majoring or minoring in Business Studies. Following this, 127 additional students were surveyed from five cohorts across different levels and subject areas including Maths (level 5/6), Physics and Astronomy (levels 4 and 5) and CS masters students (level 7).

The overall results show students were very active users of social media. All but three students (94%) used some form of social network with Facebook being by far the most popular network with only one active social networker NOT using Facebook. The average number of networks used was just over two and of the 55 students who used just two services, Twitter was most popular partner service with half of the group (at 53%) while Google+ was least favoured attracting less than one student in 20 (4%). In contrast, of the 66 students using three or more networks Google+ had been used by over three quarters (79%). One in ten students reported using four or more different social networking services.
Table 1 summarises student responses on frequency of social media use by service. An informal, qualitative 5 point scale was used to assess frequency of usage with 5 corresponding to “very often / more than once a day” and 1 being “never”. Blank responses were treated as a 1. As well as having the most users in the sample, Facebook was the most frequently used service with an average frequency of use of 4.3 for participants using the service. Twitter users numbered approximately half those using Facebook, while Google+ users represented a third. However, in terms of frequency of use, the average usage (i.e. how often people accessed the service) of Twitter and Google+ are comparable.

<table>
<thead>
<tr>
<th>Social Networks Accessed</th>
<th>Service users</th>
<th>% participants using service</th>
<th>Average frequency of use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facebook</td>
<td>174</td>
<td>94%</td>
<td>4.4</td>
</tr>
<tr>
<td>Twitter</td>
<td>82</td>
<td>44%</td>
<td>3.7</td>
</tr>
<tr>
<td>Google+</td>
<td>61</td>
<td>33%</td>
<td>3.5</td>
</tr>
<tr>
<td>Yahoo Answers</td>
<td>51</td>
<td>27%</td>
<td>2.5</td>
</tr>
<tr>
<td>Other Service</td>
<td>33</td>
<td>18%</td>
<td>3.5</td>
</tr>
</tbody>
</table>

Table 1: Social network use by student

The increased popularity of mobile internet devices (MIDs), e.g. smart phones and tablets, prompted inclusion of questions about how students accessed their social media. The intent was to see if the student data collected triangulated with more general research, and to understand how engagement might change if VLE updates became available through mobile social networks. Table 2 shows the dominance of portable computing with most students using a laptop to access a social networking service, and three quarters using a smart phone. Almost half did not use desktop computers to access their social media, while almost a fifth had used a tablet. The thirteen “other” responses were not explicitly captured but could possibly include Internet enabled TVs or games consoles.

<table>
<thead>
<tr>
<th>Devices used for Social Network access</th>
<th>Device users</th>
<th>% participants using device</th>
<th>Average frequency of use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desktop</td>
<td>104</td>
<td>56%</td>
<td>4.0</td>
</tr>
<tr>
<td>Laptop</td>
<td>161</td>
<td>87%</td>
<td>4.4</td>
</tr>
<tr>
<td>Tablet</td>
<td>34</td>
<td>18%</td>
<td>3.8</td>
</tr>
<tr>
<td>Smartphone</td>
<td>136</td>
<td>73%</td>
<td>4.3</td>
</tr>
<tr>
<td>Other Device</td>
<td>13</td>
<td>7%</td>
<td>3.5</td>
</tr>
</tbody>
</table>

Table 2: Social network use by device for students

Data on frequency of use of services and devices was supported by questions on cumulative total usage and accesses. Respondents could choose to report daily, weekly or monthly usage with the results being converted into weekly figures for comparison purposes. This cumulative data supports the reliability of individual service data, with both the total number of social media accesses and time spent using social media in a week positively correlated (with a one-side confidence between 97% and 99.9%) with an individual’s most frequently used social network and frequency of use across all networks.

The same question format was also used to investigate students’ use of the institution’s VLE. Table 3 shows reported social media use to be over twice as high as VLE use in both number of accesses and time spent. It is interesting to see that while there were free format responses suggesting very high levels of engagement with social media (e.g. “all day”, “too many”, or “a lot”/“many” hours), there were no similar remarks for the VLE.
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Students were also asked how they used social media to support their studies using the same 5 point scale as before. The results indicate students are more likely to contact staff or other students via the VLE, compared to social media. But in both cases the average values for academic contact (between “rarely” and “sometimes”) do not exceed any average for general social media use. In other words, students are just as likely to use Yahoo Answers (as shown in Table 1) for whatever reason as they are to use the VLE or Facebook to help with their studies.

<table>
<thead>
<tr>
<th>Platform</th>
<th>Average accesses per week</th>
<th>Average hours used per week</th>
<th>Interaction freq. for learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>All social networks</td>
<td>38.4</td>
<td>15.5</td>
<td>2.2</td>
</tr>
<tr>
<td>Virtual learning environment</td>
<td>16.7</td>
<td>7.3</td>
<td>2.5</td>
</tr>
</tbody>
</table>

**Table 3**: Aggregate social network use versus VLE for students

The data presented above in Table 1 to 3 provides useful background on current behaviour of our sample. This data shows that in general the students surveyed are relatively typical for their age group in terms of social media use. The more important data relates to whether students would want to engage with their academic work via social media. This was assessed using a 5 point Likert scale, alongside an open question asking about a preferred social media network to integrate with the VLE. The results in Table 4 below show that overall 62% of students were positive about integration compared to 14% against., with a score of 4 or 5 taken as a positive response in favour of integration, 3 as neutral, and 1 or 2 as negative.

<table>
<thead>
<tr>
<th>Social Network / VLE Integration</th>
<th># Preferred</th>
<th>Average Response</th>
<th>Positive Students</th>
<th>Neutral Students</th>
<th>Negative Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facebook</td>
<td>108 (58%)</td>
<td>4.1</td>
<td>83 (77%)</td>
<td>16 (15%)</td>
<td>9 (8%)</td>
</tr>
<tr>
<td>Twitter</td>
<td>18 (10%)</td>
<td>3.7</td>
<td>11 (61%)</td>
<td>4 (22%)</td>
<td>3 (17%)</td>
</tr>
<tr>
<td>Google+</td>
<td>3 (2%)</td>
<td>3.7</td>
<td>2 (67%)</td>
<td>1 (33%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>More than one</td>
<td>11 (6%)</td>
<td>4.2</td>
<td>10 (91%)</td>
<td>1 (9%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>None</td>
<td>44 (24%)</td>
<td>2.8</td>
<td>10 (23%)</td>
<td>20 (45%)</td>
<td>14 (32%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>186 (100%)</strong></td>
<td><strong>3.7</strong></td>
<td><strong>116 (62%)</strong></td>
<td><strong>44 (24%)</strong></td>
<td><strong>26 (14%)</strong></td>
</tr>
</tbody>
</table>

**Table 4**: Social network preference for integration with VLE by student
The most commonly preferred service for SM-VLE integration was Facebook, chosen by 108 students (58% of the sample of 186) with an average agreement for integration of 4.1. Among the students preferring Facebook 83 (i.e. 77% of the 108) were in favour of integration, 16 (15%) were neutral and 9 (8%) were actually opposed to integration. Conversely, some 10 10 respondents did not indicate a preferred network, even though they were positively disposed to social media – VLE integration. Of the positive students without a preferred network, 8 8 used more than one network suggesting an inability to recommend just one. Other students who did not state a preference were against integration and included explicit comments of varying degrees of hostility ranging from “n/a” or “none”, through “NONE!” to “just don't - Facebook are data thieving monkey scum! don't help the data miners”.

Looking across the range of measures, including frequency and hours of use both for individual network and aggregate behaviour, there are only two statistically significant correlations with agreement on SM-VLE integration. The first is for student's use of Facebook while the second is between student's highest (qualitatively reported) frequency of use of any social network.

<table>
<thead>
<tr>
<th>Integration Preference Factor</th>
<th>Correlation</th>
<th>Sample size</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facebook frequency</td>
<td>0.25</td>
<td>174</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Maximum social network freq</td>
<td>0.25</td>
<td>163</td>
<td>&lt;0.01</td>
</tr>
</tbody>
</table>

Table 5: Correlation between frequency of use and agreement for integration

Closer examination shows that given Facebook is the most used social network by 68% of students, and joint top by a further 17% these two measures are unsurprisingly closely dependent.

3. Differences between Student Cohorts

The overall data above shows that on average students are active social networkers, but individual cohorts varied significantly. For example, Table 6 shows the average number of social networks used across all students is 2.2.

<table>
<thead>
<tr>
<th>Social Network / VLE Activity</th>
<th>#</th>
<th>Social Networks</th>
<th>Social Network Activity / week</th>
<th>VLE Activity / week</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Accesses</td>
<td>Hours</td>
</tr>
<tr>
<td>Maths</td>
<td>12</td>
<td>2.1</td>
<td>20.1</td>
<td>10.5</td>
</tr>
<tr>
<td>Physics &amp; Astro 1</td>
<td>45</td>
<td>2.0</td>
<td>32.5</td>
<td>12.9</td>
</tr>
<tr>
<td>Physics &amp; Astro 2</td>
<td>24</td>
<td>1.5</td>
<td>26.0</td>
<td>9.1</td>
</tr>
<tr>
<td>Web App Design</td>
<td>70</td>
<td>2.3</td>
<td>38.9</td>
<td>18.5</td>
</tr>
<tr>
<td>Web Services 1</td>
<td>20</td>
<td>3.0</td>
<td>84.4</td>
<td>24.6</td>
</tr>
<tr>
<td>Web Services 2</td>
<td>15</td>
<td>2.0</td>
<td>23.8</td>
<td>11.8</td>
</tr>
<tr>
<td>Total</td>
<td>186</td>
<td>2.2</td>
<td>38.4</td>
<td>15.5</td>
</tr>
</tbody>
</table>

Table 6: Social network and VLE use by cohort

Note: highest values have a light grey background, lowest have white text on black However, the least networked Physics and Astronomy 2 cohort, (or PA2), had an average of 1.5 and half the students used just one social network. In contrast the most networked cohort, Web Services 1 (WS1), used an average of 3.0 and only one student used just a single social network. These extremes of online engagement (or lack of it) are also evident in the frequency of use and time spent on both social networking and the VLE: WS1 having the highest average in all fours measures; PA2 having the lowest in three of these four measures; and WS1 being approximately three times as active as PA2. Looking in more detail at the individual services and devices used as shown in Table 7, the least active social networkers (PA2) unsurprisingly score lowest in ten of the twelve measures. For example, they have proportionately the fewest smartphones social networkers and those students who do use smartphones to access social networks do this on average least frequently. Similarly the most socially networked WS1 students score highest in eight out of twelve measures.
Beyond the obvious parallels, the detail highlights interesting variations. For example, the WS1 cohort are not the most frequent Facebook users despite them all having an account. This may be a reflection of them being more active on Google+ and having the highest engagement with Twitter. Conversely, the opposite is true of the WS2 group who have the highest Facebook frequency of use but lowest take-up of Twitter. The use of device may also impact on which networks are preferred. For example, above average Tweeters (WS1, WAD, Maths) are above average smartphone users, while the most active Facebookers (WS2) are the most active laptop networkers.

<table>
<thead>
<tr>
<th>Social Network / VLE Activity</th>
<th>Facebook</th>
<th>Twitter</th>
<th>Google+</th>
<th>Desktop</th>
<th>Laptop</th>
<th>Smartphone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maths</td>
<td>92%</td>
<td>4.6%</td>
<td>42%</td>
<td>25%</td>
<td>100%</td>
<td>87%</td>
</tr>
<tr>
<td>Physics &amp; Astro 1</td>
<td>96%</td>
<td>4.4%</td>
<td>35%</td>
<td>22%</td>
<td>44%</td>
<td>87%</td>
</tr>
<tr>
<td>Physics &amp; Astro 2</td>
<td>96%</td>
<td>4.2%</td>
<td>25%</td>
<td>6%</td>
<td>38%</td>
<td>88%</td>
</tr>
<tr>
<td>Web App Design</td>
<td>90%</td>
<td>4.4%</td>
<td>53%</td>
<td>40%</td>
<td>67%</td>
<td>80%</td>
</tr>
<tr>
<td>Web Services 1</td>
<td>100%</td>
<td>4.5%</td>
<td>70%</td>
<td>55%</td>
<td>80%</td>
<td>95%</td>
</tr>
<tr>
<td>Web Services 2</td>
<td>93%</td>
<td>4.9%</td>
<td>20%</td>
<td>37%</td>
<td>47%</td>
<td>53%</td>
</tr>
<tr>
<td>Total</td>
<td>94%</td>
<td>4.4%</td>
<td>44%</td>
<td>33%</td>
<td>56%</td>
<td>87%</td>
</tr>
</tbody>
</table>

Table 7: Social network use by cohort, service and device

The final area of difference worth reporting is in attitudes to integration. One might expect that the least active social networking group, the PA2 cohort, would be least interested in SM-VLE integration. However, Table 8 shows the opposite is true with PA2 having the highest average agreement, the largest proportion of positive students and the biggest majority in favour of agreement (as measured by the difference between positive and negative students). The least keen group are in fact the PA1 cohort.

<table>
<thead>
<tr>
<th>Social Network / VLE Integration</th>
<th>Average Agreement</th>
<th>Positive Students</th>
<th>Neutral Students</th>
<th>Negative Students</th>
<th>Majority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maths</td>
<td>3.5</td>
<td>58%</td>
<td>25%</td>
<td>17%</td>
<td>42%</td>
</tr>
<tr>
<td>Physics &amp; Astro 1</td>
<td>3.2</td>
<td>40%</td>
<td>33%</td>
<td>27%</td>
<td>13%</td>
</tr>
<tr>
<td>Physics &amp; Astro 2</td>
<td>4.3</td>
<td>88%</td>
<td>8%</td>
<td>4%</td>
<td>83%</td>
</tr>
<tr>
<td>Web App Design</td>
<td>3.7</td>
<td>66%</td>
<td>21%</td>
<td>13%</td>
<td>53%</td>
</tr>
<tr>
<td>Web Services 1</td>
<td>3.9</td>
<td>65%</td>
<td>25%</td>
<td>10%</td>
<td>55%</td>
</tr>
<tr>
<td>Web Services 2</td>
<td>4.1</td>
<td>73%</td>
<td>27%</td>
<td>0%</td>
<td>73%</td>
</tr>
<tr>
<td>Total</td>
<td>3.7</td>
<td>62%</td>
<td>24%</td>
<td>14%</td>
<td>48%</td>
</tr>
</tbody>
</table>

Table 8: Social network and VLE use by cohort

More detailed analysis of differences in students is possible based on subject area, years of study and background of students. However, this may not be appropriate given PA1 and PA2 have very different attitudes to integration but are students recruited to the same School, studying the same subject and separated by just a single year of study. Other approaches to classifying students and their use of technology are well known, whether this is as digital natives versus tourists [Prensky, 2001], inhabitants vs visitors [White and Le Cornu, 2011], or groups in the innovation diffusion model with its early adopters (perhaps typified by WS1 in this study) versus laggards (e.g. PA2). However, these classifications tend to be too ill defined to have practical implications as discussed. For example, the majority of students in this study might be classified as innovators or early adopters on the basis of their age, education and if not disposable income then debt tolerance. This is a point returned to in the conclusion.

4. An Architecture for VLE-Social Media Integration

In the eSCISM project standard features of our VLE were exploited to enable updates within the VLE to be broadcast via social networks. While the VLE is a “home grown” system, the same approach would work with any system that publishes a feed or summary of recent updates. Our work extended the in-built VLE communication capabilities that were previously limited to:
- a "pull" approach where visitors were shown recent news posted by staff;
- a "push" approach in which everyone on a course could be emailed directly;
- a "push/pull" approach that generated a simultaneous email and news post.

The updates feed means that the standard post and email information flows, shown at the top of Figure 4, could be augmented with status updates being posted to both Facebook and Twitter via the VLE RSS feed. Students (or staff) who had chosen to receive updates via either Facebook or Twitter would automatically see the update information in their news/Twitter streams.

![Figure 4: Information flows between VLE and social networks](image)

4.1 Design Principles
In choosing to simply publish updates from the VLE, we are engaging with social media as a communication channel, rather than user generated content as discussed in section 2. This strategy is based on a number of key principles identified at the start of the project. In particular:

- the use of social media should be an optional "add on";
- privacy is paramount with users disclosing as little information as possible;
- setting up and using an integrated system should be as simple as possible;
- the project should be driven by student desire / benefit.

Corollaries or consequences of these principles include:

- the VLE is seen as the prime originator and/or repository of content;
- existing functionality should be reused where possible rather than reinvented;
- simple social updates should be used to highlight new updates in the VLE;
- no-one should be disadvantaged if they choose not to use social media;
- any interaction via social media should present a professional image;
- staff should not have to publish to, or monitor updates from social media;
- staff should not publish social updates using their personal identity;
- students should be in control of their own use of social media.

These design principles ruled out two common approaches to interaction in Facebook in education, namely: creating or using an existing personal account for directly interacting with students; or creating a group for students to enrol in. Both approaches could compromise privacy for staff and students and both would generate more work as dual posts are required to ensure those not using social media were kept up to date.

4.2 Implementing VLE-Social Media Integration
A high level view of the eSCISM implementation is shown in Figure 5. Third party applications that exists outside of both the VLE and social networks were used to read the public updates feed which is published as an RSS (version 2.0) feed. In the case of Facebook, the RSS Graffiti application was used to read the VLE RSS and publish a status update to a specific module page via the Facebook API. In the case of Twitter, Twitterfeed was used to read the RSS feed and publish tweets to a specific module account.

![Figure 5: Applications and services supporting VLE notifications via social networks](image)

No code or customised programming was required to integrate the VLE with the social media destinations, although it was necessary to create a new Facebook page and Twitter account for each module with names were chosen to reflect a hash tag naming convention already in use within the VLE and based on course identifiers. This process, along with configuring RSS Graffiti and Twitterfeed, took approximately 30 minutes per module and could be undertaken by any reasonably IT literate person.

The final step in configuring the social media update process is for students (or staff) to opt to receive the social media updates. This is done either by following the module Twitter account (e.g. by searching for uh6com0265 or going directly to twitter.com/uh6com0265) and/or liking the module Facebook page (again by searching for uh6com0265 or going directly to facebook.com/uh6com0265). The results of the configuration process can be seen in Figure 6 below in which a news post added to the VLE (shown top) generates a Tweet in the module account, and an update on the Facebook page. The news item title is reproduced in the social media updates with a prefix indicating a news item added when the RSS feed is generate and the update includes a link back to the original item in the VLE.
It is worth noting that “liking” a page highlights the importance of user control over their privacy settings. Liking a page, and therefore disclosing a user name to the page administrator, does not of itself represent a significant breach of privacy. In addition, unless they post something to the module page, a student’s identity will not be visible to other friends or followers. However if users have chosen settings (deliberately or through inaction) that allow public access to personal content then a user name may assist (i.e. save time for) others in discovering what is already “public”. While liking or posting to a page does not create a new breach of privacy, it does expose the main breach that has occurred independently of the identity disclosure.

5. Conclusion (250 > 195)
The architecture for VLE-social network integration discussed above shows how staff and student interactions with and through the VLE can be made visible through social media channels. In addition, the survey work shows that the majority of students questioned would approve of this. However, this work is not without caveats in that:

- there is large variation in student use of social media;
- positive student attitudes are not yet support by evidence in use;
- the current implementation is not scalable across a whole institution;
- there is large variation in student (and staff) approval for integration.

The last point is emphasised by the fact that two different cohorts in the same subject area can be at opposite ends of the integration spectrum. This shows that student subject is unlikely to be useful as a means of planning or targeting integration. Using results from both staff and students we have identified a typology based on attitude to integration and use of social media [Saward 2012]. While this may be more useful in identifying how to target different user groups, more detailed factor analysis is required to map the various user characteristics to these different groups.

References (250 > 276)


Biography

Dr Guy Saward has over 25 years computing experience with a broad understanding of technology and its impact. He has spent the last 14 years in Higher Education at the School of Computer Science at the University of Hertfordshire working on teaching, research and commercialisation related to Internet technologies, software engineering and change management. His most recent work focusses on using web social media technology to enhance learning.
5. Creating academic skills e-resources to increase flexible learning opportunities and promote independent learning

Mary McCauley
University of Hertfordshire

Abstract

Until 2012, the ASU website contained read-only skills guides and slides to support teaching and assist students develop academic and employability skills at Hertfordshire Business School (HBS). ASU successfully secured funding to create academic skills e-resources to increase flexible learning opportunities and promote independent learning. This supported UH’s Student Experience Strategy 2010-15 (2010), HBS’s mission (2011), as well as previous research in HBS (McCourt (2011); Seed and Hyseni’s (2011)) indicating a demand for pod/videocasts.

83 staff and 100 students responded to our online questionnaire in spring 2012. The findings informed us of their skills needs and identified specific skills e-resources that would benefit both parties: academic writing, critical and analytical skills, building arguments, presentations, undertaking dissertations, personal skills, statistics, using Excel and researching. E-resources requested will be available to trial during the 2012/13 academic year. Further data will be collected in April 2013 to inform us of the usefulness of the e-resources and identify gaps or additional e-resources required.

Creating e-materials supports students’ various learning styles and allows for vital off-campus support equivalent to face-to-face support. International students and special needs students find different formats particularly useful – they can access it anytime, anywhere and learn at their own pace. These e-resources will assist all our students to succeed, increase their graduate attributes and improve their employability chances, whether they are on-campus or distance learning.

Now the technology is in place and staff trained on using the equipment, ASU can continue to develop and update resources into e-materials to enhance our suite of web materials. Equipment and software purchased can be used by others to enhance T&L opportunities, creating pod/videocasts for flexible/distance learning materials, for assessment and feedback, allowing for more inclusive teaching. ASU can also act in an advisory capacity, guiding others inexperienced in using the equipment and software.
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1. Introduction

JISC's strategic objectives (2010-12) state that today "digital natives" (Prensky, 2005) expect a "fully functioning e-learning environment with content and resources available online 24 hours a day. A growing community of part-time and overseas students, lifelong learners and professionals, is enabled by flexible learning" where UK Higher Education Institutions with a rich technology-enhanced learning culture will be more attractive in domestic and global markets (JISC, 2010). Students state they like to choose how and when they learn and view technology as the enabler, especially when choosing part-time study, distance degrees and blended learning modules. At HBS there is both a top down approach, driven by the School and a bottom-up approach, where students are requesting more integration. Current HBS successes with e-learning include the BABABL degree, online Research Methods and Dissertation modules run with HBS international partner colleges.

McCourt's (2011) findings from the Dissertation Game at HBS reports that students want more resources and support guides: "I just completed my Post Graduate degree, I wish I had access to these resources whilst I was studying", "I am an international student and I would like to be able to go back and use these materials after attending the lecture", and "I can see the value of these online lectures." In addition, Seed and Hyseni's (2011) findings show that 96% of HBS students on a large L6 module find lecture audio podcasts useful, 88% found video podcasts useful and all of them believe that e-learning contributes to their learning. Student comments were "videocasts are fantastic when revising...I can go back over areas I did not understand the first time", "really useful when the lectures are podcast", "podcasting is a great idea", able to reinforce the learning...using podcasting".

From September 2010 to September 2011 there were 27,900 unique homepage hits to the ASU website. From September 2011 to June 2012, there have been 29,753 unique hits to the site. This shows there is already an increase of almost 2,000 hits this academic year, before the total will be calculated in September 2012. "ASU" is the most searched term on StudyNet, according to the UH Managed Learning Environment MLE. This indicates the site is widely accessed. However, until summer 2012, the ASU website contained read-only skills guides and workshop slides to support our teaching and assist our students develop their academic and employability skills at HBS. ASU were successful in securing funding from LTI to create academic skills e-resources to increase flexible learning opportunities and promote independent learning.

Creating innovative e-materials in different formats supports the students' various learning styles and allows for vital off-campus support equivalent to face-to-face support in workshops. The e-resources will assist students across all degree programmes at undergraduate and post graduate levels succeed at HBS, increase their graduate attributes and improve their employability chances. The project covered the following Student Experience Strategy 2010-15 themes:

- Provide opportunities for flexible and technology-enhanced learning provision.
- Promoting independent learning; providing students with opportunity for personal, academic and professional growth.
- Enhancing student employability and incorporating opportunities for work experience.

2. Project Objectives

The project supported HBS's mission (2011) to develop a range of blended and distance learning programmes for domestic and overseas delivery, establish a reputation for delivering part-time post graduate modules /programmes and develop innovative flexible learning packages for post graduates, develop international dual awards with a number of partners and expand our network of blended learning colleges, by 2015.

Part of UH's strategic targets is to provide every student on a campus based programme, the opportunity to study at least one flexible learning module a year. Thus, it is vital HBS supports them in this and was an obvious role for ASU to add value to the student experience. In line with UH Student Experience Strategy 2010-15 (2010), to continue to be a leading university in terms of technology enhanced learning provision, providing flexible learning opportunities and to ensure best practice systems are in place to facilitate student support, this project aimed to create e-materials in videocast and audio-podcast formats to compliment the read-only skills guides and slides currently on the ASU site.

The objectives of the project are to convert, design and develop key academic guides and slides into video capture, voiceover, audio-podcasts and interactive quizzes, to engage students with an online resource bank of essential academic skills they require to help them succeed while at HBS, and equip them with transferable employability skills. Cottrell (2001) believes a multi-sensory approach, including visual, auditory, motor and kinaesthetic memories, will improve students' learning and register it in their long term memories. These e-materials will support all students, particularly those undertaking flexible learning modules and distance learning degrees, and the staff teaching these modules. Creating materials in various formats to meet students' different needs, including off-campus support, is in line with UH's blended learning approach.
3. Methodology

Primary data, in the form of two online questionnaires (one for HBS staff and the other for students) were sent out in spring 2012. The questionnaire consisted of both open and closed questions. Eighty-three staff responded and one hundred students responded and the findings informed their skills e-materials needs and identified specific skills e-resources that would benefit both parties.

4. Research Findings
The staff questionnaire results were as follows: 88% of staff felt that students would benefit from audio podcasts and 91% believed students would benefit from video podcasts. Those with reservations (12% and 9%, respectively, felt that students may not attend class and it depended on the quality of the resources. 80% agreed that they wanted ASU to create e-resources. They felt that e-resources:

- Support face-to-face time; reinforce and deepen knowledge and understanding.
- Videocasts certainly reinforces learning; students have the opportunity of using it at their own place, time (and pace)
- Add flexible and accessible resources to their study
- Invaluable for overseas students…can listen and watch over and over again
- Meets the needs of students with learning difficulties and discussion of sometimes difficult key concepts helps with understanding
- Students learn in a variety of ways—resources available in a variety of formats supports this
- Adds variety to learning; Increases engagement
- Provide opportunities for better revision
- Videocasts are visual…therefore useful for a generation heavily influenced by TV/ videos… make lesson more exciting and meaningful
- They tell me they like them

The student questionnaire findings revealed that 74% of HBS students wanted ASU to create e-resources. 87% felt they would benefit from audio podcasts and 92% felt they would benefit from video podcasts. Their comments included:

- More interactive so more memorable
- Students may learn better by being proactive
- More interesting and easier to understand
- Allows for flexible learning; very, very practical; Audio can be transferred to a phone so used on the go
- Can go through the pod/video cast yourself pausing it at crucial times
- On an online course…useful to alternate reading with other forms of acquiring information…listening to or seeing someone makes it a bit more personal.
- I take information in better when I hear it then reading the lecture notes myself; More engaging that just reading slides
- Cater to a wider range of learning styles and can help to make learning/revising more interesting
- When you put music on repeat on your iPod or MP3, eventually you learn some of the words…same with audio podcasts.

These finding are supported by Beilke et al (2008) who note the benefits of podcasting in a multicultural educational setting as a way of providing opportunities for students to develop their vocabulary and practice English if it’s their second language.

HBS staff and students were asked if they thought e-resources would improve the student experience. Their responses were that 71% of staff agreed, 4% disagreed and 25% were unsure. 71% of students agreed, 2% disagreed and 27% were unsure. Those who were ‘unsure’ had not tried/used e-resources previously. These findings are shown in Figure 4.1 below:
HBS staff and students were asked if they thought e-resources would meet the different learning styles of students. 76% of staff agreed, 4% disagreed and 20% were unsure. 68% of students agreed, 4% disagreed and 28% were unsure. Those who were ‘unsure’ had not tried/used e-resources previously. The findings are shown in Figure 4.2 below:

These findings are supported by Moses and Morales (2006) who note that video podcasts are useful for different learning styles, particularly auditory and visual learners, and the pause and rewind options will be beneficial for learners with other needs such as dyslexia or attention deficit disorders. In addition, Windham (2007) claims that using words, sounds, pictures, and video incorporates a wider range of learning styles and makes the students engage more with the materials rather than just simply undertaking a 'normal presentation'.

92% of the students stated that they actively apply what they learn in their skills module to their other Business modules. Key skills e-resources requested by the both HBS staff and students were: academic writing – format, style, critical and analytical skills, building arguments, presentations, undertaking a dissertation, personal skills, statistics, using Excel and researching data.
Dec ’11 – Jan ’12 Secondary research undertaken.

18 Jan ’12 Pitched to LIBRU. Suggested we undertake a Design Science research methodology (Vaishnavi & Kuechler, 2004). Met other research project groups and identified two projects, Creativity and a Numeracy project, which complements our project and we will liaise regularly with these other teams.

30 Jan ’12 Audacity training undertaken.

1 Feb ’12 Camtasia licences provided to each team member. Camtasia training undertaken.

23 Feb ’12 Ethics clearance given for research to go ahead.

Mar-Apr’12 Statistics e-materials (videos for beginners in SPSS) were created and uploaded to the ASU website. Available at:


April ’12 HBS students and staff Questionnaire data collected.

April/May ’12 Research findings write up. Suggestions (verbally/online feedback form) on the new e-materials from BS staff and students at end Semester B.

3 May ’12 Workshop at the UH Annual Learning and Teaching Conference. Attendees were encouraged to create e-resources for their modules by creating audio and video podcasts during the session.

14 June ’12 Seminar at the 7th International Blended Learning Conference. Links forged with University of Roehampton, as a result.

July ’12 Additional ASU staff joined the project team. Camtasia training/refresher undertaken by the team and licences provided.

July–Sept ’12 Continue creating e-materials throughout summer. New e-materials will be uploaded to ASU site, ready for 2012/13 academic year.

Oct ’12 Newly created e-resources advertised to HBS staff and students and their usage encouraged for 2012/13 academic year. Student testing will take place.

Mar - April ’13 Online questionnaires to HBS staff and students to gain feedback on the usefulness of the e-resources and suggestions for new e-materials.

April ’13 Student focus groups will run – all levels of undergraduate degrees; distance learning BA Business Administration degree, full and part-time post graduate degrees, post graduate distance dissertation

6. Conclusion

Lecturers and students across HBS will benefit from the e-resources, particularly those involved in flexible learning modules and on distance learning degrees. The BABABL programme will benefit from skills e-materials to support the staff teaching the seminars in our international partner colleges. However, our student body at HBS will also benefit as the e-materials will be available to them on the ASU site and will address their needs, depending on their learning styles. Students with special needs find different formats particularly useful as they can access it anytime, anywhere and learn at their own pace.

It will also benefit our part-time degree students, and those in our link colleges who cannot attend workshops due to work and personal commitments. In addition, post graduate students who begin their degree in Semester B, international students, Graduate Certificate in Business students, MBA students and those studying professional qualifications would welcome this support. CIBT students could access the materials also.

This resource bank is a 'selling point' for potential HBS students, particularly international, mature and part-time students who need to familiarise themselves with the skills required in HBS for success in their studies. The website materials is available across all UH faculties (existing materials are frequently requested by other UH Schools). There is the possibility to market these distance learning e-materials to our partner institutions worldwide and to our feeder Colleges in Hertfordshire.
The e-resources will be available for reuse with subsequent year groups after the 2012/13 academic year. The research findings could influence future modules and Induction. As the technology is now in place and the staff are trained on using the equipment, we can continue to develop and update our resources into e-materials to enhance our suite of web materials. The financial benefits are extended beyond our project: equipment and software purchased can be used by others in HBS to enhance their T&L opportunities, creating audio podcasts and videocasts for flexible learning modules and distance learning degree materials, for assessment and feedback advice and guidance, allowing for more inclusive teaching by presenting their materials in different formats. We can also now act in an advisory capacity, guiding others who are inexperienced in using the equipment and software.

7. Recommendations
A second questionnaire will be sent to HBS staff and students in April 2013, at the end of the 2012/13 academic year, when it is envisioned that the e-resources we created will have been utilised. The HBS distance learning degree begins in spring 2013, so respondents will also include students undertaking distance learning degrees, and the staff teaching on the modules, as well as those studying or teaching flexible learning modules. Feedback will also be sought from a number of student focus groups, such as campus-based students at each undergraduate level, full and part-time students at postgraduate level, those undertaking the undergraduate BA Business Administration degree and the distance postgraduate Strategic Business and Information Systems dissertation.

The aim of this data collection is to gain feedback on the usefulness of the newly created e-resources and to inform the team of further e-resources required by both parties, which will improve the student experience, assist staff in their teaching and assessments and provide graduate attributes of learning and research skills, encourage intellectual depth, breath and adaptability, and improve their employability opportunities.
8. References


Bibliography

I am an Academic Skills Adviser in the Hertfordshire Business School (HBS), supporting students and staff in academic skills, and teaching and learning matters. The academic skills material is available on the ASU website (http://studynet.herts.ac.uk/go/asu). Currently, I am developing a skills module for the Business Administration online degree (starting February, 2013). My research interests are assessment, feedback, improving the student experience, i.e. Induction, PAL, peer mentoring, and e-learning.
6. An application of pedagogical principles and values implemented through Oaklands College HE Academic Community online platform – results and barriers.

Dr Miodrag Ivanovic, Oaklands College
Sharon Stone, Oaklands College

Abstract
The initial idea for the project was driven by our understanding of HE programmes to develop as John Stuart Mill argued not skilful professionals but cultivated human beings. Believing in this noble idea we set up the Oaklands HE Academic Community to improve academic standards and professional co-operation. Our community includes the exchange of resources, ideas, and the sharing of good practices between and within different academic programmes and departments. The main principles of future teaching and learning - personalisation, collaboration and informalisation - were implemented to provide an opportunity for the students’ learning, academic and professional development, ethical and moral growth. In this paper we describe the initiative and guiding principles for success including the most relevant and valid teaching and learning theories, the importance and relevance of improving overall academic and professional skills, supporting technologies and the main principles of Wenger’s practice of communities as well as progress and future barriers for development.

Background
John Stuart Mill argued “The object of universities is not to make skilful lawyers, physicians or engineers. It is to make capable and cultivated human beings.” (Mill 1867:643) The purpose is to make intelligent employees able to think and rationalise and apply their knowledge. Mill noted however that students were not fully prepared by their schools for the work which they were expected to undertake, and that the Universities had to carry out this preparation (Mill 1867). Two centuries later this is a situation we still find ourselves in. Many of the students on our HE programmes lack the necessary academic and professional skills to complete academic tasks beyond minimum requirements.

Oaklands College is a large general further education college in Hertfordshire with campuses in Welwyn Garden City and St. Albans, and a further training provision in Borehamwood. The college currently offers twelve Higher Education programmes (part-time and full-time) including HNC/HND, extended degree and foundation degree programmes and a BSc in Construction Management. This paper will focus on the Construction Management foundation degree and BSc programme, a part-time programme.
We regularly encountered the same difficulties with the students:

- An evident and huge gap in the students’ academic and professional skills
- No formal provision for sharing, promoting or exhibiting the best of the students’ written work, nor for benchmarking their work against that of others (either at Oaklands or across the Hertfordshire consortium colleges)
- Very little co-operation or collaboration between students and staff within the HE programmes or between different programmes
- An unclear and not very well defined progression route through HNC, FD and BSc programmes in terms of academic and professional skills requirements, particularly in how to complete tasks such as writing literature reviews, conducting primary and secondary research, applying and implementing relevant knowledge using appropriate and valid case studies from industry, good business practice and new trends; and especially lack of ability to analyse and evaluate the main topics within assignments, projects and dissertations
- Inadequate use of the VLE, including particularly areas such as Student Support and Learning Resources
- Lack of knowledge or ignorance of professional standards and practice, norms and regulations, expectations and existing benchmarks
- Lack of connection with local business community to visit, observe and monitor good practice, or set up work-based placements. (This results in students almost always analysing the practice of multinational organisations or large UK companies with a consequent limited access to relevant information, with no means to ask questions or carry out research and so very often relying on glitzy and extravagant promotional material.)

Lesson outcomes are often built around the lower level learning domains of Bloom’s (1956) Taxonomy resulting in students developing and demonstrating only the basic cognitive competences rather than mastering the higher level skills of analysis, synthesis and evaluation. Mayes and de Freitas (2004:12) note that “…many learning outcomes in HE and FE will refer to mastering a skill”. They further note that Biggs has pointed out with his term ‘functional knowledge’ and Goodyear with ‘working knowledge’, most competences that are relevant for the world of work consist of conceptual understanding and procedural knowledge. The focus on development of skills such as ‘working knowledge’ or ‘functional knowledge’ and ‘technical skills’ neglects development of academic and professional skills. It was of great importance to us therefore, to develop students’ higher level skills – critical thinking, evaluation and synthesis.

The value of Study Skills

Relevant study skills have also been identified of as value by others. As Cottrell (2001) reports, employers and government are calling for students skills to be developed, as amongst other things it will give them the confidence and tools to direct their own learning, and students will learn to recognise gaps in their knowledge and continue to update their knowledge once they have left University. The Committee of Vice-Chancellors and Principals (CVC) Report on skills development (1998) listed skills needed for employability and those required included intellectual skills (critical, evaluative and analytical skills).
Although there is acknowledgement that students’ study skills need to be developed, generally teaching these skills is seen as the responsibility of the HE Learning Support tutor whose primary role is to support individual students. Many students are reluctant to book sessions with the Learning Support tutor, particularly students on the Construction Management programme. Recognition of the need to develop the skills of the Construction Management students in particular has resulted in the inclusion of a unit on personal and professional development being included in year one of the Higher National Certificate (HNC) programme. With its focus on the wider ‘key skills’ of improving own learning and performance, working with others and communication, there is again little time or emphasis on intellectual skills. It should also be noted that students on the Construction Management programme may spend five years studying before they achieve their BSc if they begin their studies with the two year HNC. On completion of the HNC the Foundation Degree lasts two years and students spend a final year working on a dissertation for the BSc Award.

Learning and study skills development needs to be a continuous process of importance for all students and their tutors. This would as Cottrell (2001) states fit with Wolfendale’s (1996) argument that learning development “promotes and enhances the idea of striving to achieve excellence.” (Cottrell 2001:6)

A solution

As Mason (2012) states, learning is a social activity and takes within a social learning dimension through both scaffolded interactions and interactions with others (Vygotsky’s (1978) Zone of Proximal Development). Lave and Wenger (1991) followed on Vygotsky’s work with their view that learning is not necessarily a cognitive process but takes place through social interaction and develops according to the situations in which the students find themselves. The students on the Construction Management degree course are work-based and so are engaged in their own situated learning. This situated learning takes place within ‘Communities of Practice.’ (Wenger 1998)

Wenger (1998) defines a community of practice as “a group of people who share a concern or a passion for something they do, and learn how to do it better as they interact regularly.” (Wenger 2006:1). This definition reflects the fundamentally social nature of human learning and is very broad. It applies to a band of musicians, who learn how to play in harmony, as well as a group of engineers who learn how to design better devices or a group of supermarket employees who seek to improve service to customers.

Wenger (1998) identifies that communities of practice usually involve several levels of participation depending on relevance of the different domains to the participants. Categories of membership and participation might therefore include a small group of people whose commitment motivate and sustain the community (core group); active participants who are acknowledged as practitioners and define the community; participants who only engage with the community when they have something useful to contribute or the topic interests them; peripheral participants who may be active elsewhere and use the community as a network, and transactional participants who interact with the community occasionally to receive or provide a service or to gain access to the community’s resources.

Our own attempt at a Community of Practice is the website we created (http://academiccommunity.oaklands.ac.uk) to develop and encourage academic community engagement and cooperation between students, staff and business. Our aims are to provide additional opportunities for students to participate, share and improve learning outcomes and fulfil their potential.
A wide range of activities can be included in academic community engagement and cooperation. Our community attempts to offer the following:

- Sharing of tips and research sources
- Exchange of resources and ideas
- Question and Answer
- Web forum and discussion
- Online and social network engagement
- Workshops and master-classes
- Collaborative students projects
- Trade of books
- Advertising Part Time and Full Time jobs
- Essential study skills tips and resources

We currently place ourselves at the core of the Community having instigated the community and now sustaining it with HE staff and students as active participants (see figure 1 below).

Figure 1 Levels of Participation – Oaklands HE Community
Wenger (1998) suggests mutual engagement, joint enterprise, and a shared repertoire make up the constituent parts of a community of practice. The first constituent sets a community of practice apart from a simple aggregate or network of people because it concerns the sustaining of a ‘dense relation of mutual engagement’. (Wenger 1998:74) The second constituent - joint enterprise is defined by the level of ownership and the functionality of the group for itself. The last constitutive element is shared repertoire and includes its “… routines, words, tools, ways of doing things, stories, gestures, symbols, genres, actions or concepts that the community has adapted in the course of its existence”. (Wenger 1998:83)

In creating our website to support, develop and set up a platform for students’ engagement, exchange of ideas and benchmarking of students’ work, we have the first constituent part of our community of practice. Bringing together the second and third constitutive parts of our HE Community will be a harder and more challenging task. A distinctive and mutual ownership of the HE community will require a joint effort from all parties including the students, staff and relevant academic departments.

We anticipate an even harder task will be to establish, develop and nurture a shared repertoire, especially ways of doing things and sustainable actions and concepts as the basis of its existence.

**Learning theories and consequent challenges**

Illeris (2009:10) describes three angles of learning: content (knowledge, understanding skills), incentive (motivation, emotion, volition), and environment (action communication, cooperation). A challenge to the success of our project will be the sensitivity and incentive to learning of our students and in which way the learning content will be ‘obsessed’ with the incentives at stake, whether “… the learning is driven by desire, interest, necessity or compulsion.” (Illeris 2009:10) The importance of the incentive function is also underlined as being as “… crucial, i.e. how the situation is experienced, what sort of feelings and motivations are involved, and thus the nature and the strength of the mental energy that is mobilised. The value and durability of the learning result is closely related to the incentive dimension of the learning process.” (Illeris 2009:12)

Illeris (2009) points out that a psychological mechanism which may block or distort relevant learning is a mental resistance to academic standards such as referencing, research or essay writing. Many of our students view these as unnecessary skills which put them in an uncomfortable zone.

Wenger (2009) proposes a social theory of learning arguing that learning results from social participation. His social theory of learning consists of several components peripheral to the centre - learning. His components include community - learning as belonging; practice - learning as doing; identity - learning as becoming and meaning - learning as experience. While these components are deeply interconnected any of those on the periphery could be switched with the centre and the basic framework would still make sense. Wenger (2009) argues that placing the focus on social participation has implications for supporting learning. Individuals must engage in and contribute to the practice of their community, communities must refine their practice and ensure new generations of members, and organisations must sustain the interconnected communities of practice.
Cousin and Deepwell (2005) suggest an overlap between “the pedagogic values of network learning” (Cousin and Deepwell 2005:57) and Wenger’s (1998) communities of practice with both being social theories of learning. Their suggested implications for the facilitation of network learning match concerns we have noted above including allowing time for the community to develop a shared repertoire and allowing learning practices to come from the participants rather than being imposed by the facilitators. As Cousin and Deepwell (2005) note however, these concerns should not deter practitioners from implementing communities of practice to encourage learning.

**Technology as the driving force behind Oaklands HE Academic Community**

The EDUCAUSE Centre for Applied Research Report on students and ICT (ECAR 2011) underlines that there are four major academic benefits to using technology. It gives students easy access to resources, can makes them more productive, help them feel connected, and can make learning a more immersive, engaging, and relevant experience. The ECAR (2011) research confirms that the main distinct benefits of technology for academic success are as following: 82 per cent of students state that technology gives them access to a wide range of resources; 76 per cent say that use of technology extends learning beyond the classroom; 74 per cent state that technology allows them to produce higher quality work, and 63 per cent declare that technology enables them to reach their true academic potential.

Although students prefer to keep their academic and social lives separate, the ECAR report (2011) notes that many students say they are comfortable using social networking to communicate and connect with other students, and even tutors, about coursework. According to ECAR (2011) research 90 per cent of students use Facebook with 74 per cent of the students surveyed reporting they use it several times a day (ECAR 2011).

ECAR (2011) states that for students technology today is mostly about access and efficiency. Above all else, technology makes it easier to access a wide range of resources, dispense with administrative tasks, track academic progress, and work faster. One of the aims of our website is to aggregate many of the most relevant resources and web links to help students easily and effectively find a wide range of academic and professional resources.

Our project initially entailed the use of a Wordpress blog with additional pages including forums. Noting that many of our students used at least one social networking site we also set up accounts on social networking sites including Twitter, Facebook and Linked In.

Representative of our decision to include social networking sites in our community of practice was the statement of the students who affirmed “My generation is a social networking generation. We devote most of our time to Tweeting and or reading tweets, it would help if we could communicate with our professors in this way because most of us aren’t able to contact them during their office hours.” (ECAR 2011:26)

Our own survey results confirm that staff and students would value a resource to develop the academic and professional skills of the students, and increase communication between students across the HE programmes.

Figure 2 Staff survey question: Which topics or resources do you think are most useful? (You may select more than one)
72 per cent of the 46 college HE teaching staff surveyed thought that the provision of academic skills resources would be useful and 50 per cent thought professional skills would be useful.

Figure 3 Student survey question: Which topics or resources do you think are most useful? (You may select more than one)

The response from students to the same question was similar with 76 per cent of the students valuing academic skills resources and 59 per cent agreeing that professional skills resources would be useful.
Figure 4 Staff survey question: Assess our initiative to improve contact and support between HE students across different programmes (where 1 equals low and 10 is excellent)

Source: Result presented as part of primary research by online survey of Oaklands academic staff November 2011

Staff also agreed that improving communication between students on different programmes was important but valuing the development of professional links as slightly higher with 32 per cent of respondents rating this as most important.

Figure 5 Student survey question: Do you use or would you use appropriate recommended Apps on your phone (or iPod/iPad) if recommended to support your studies?
As the ECAR (2011) report noted students want to use technology for communication. Student comments in our survey included suggestions that we use “Twitter or Facebook updates”.

The Horizon (2012) report identifies mobile applications as a technology to watch on the ‘near-term horizon’ with use of mobile applications being amongst the fastest growing in higher education at the moment. Horizon (2012) suggests adoption of mobile applications as a mainstream tool will take place within the next twelve months. Again our own research confirms this (see figure 5 above). 76 per cent of students we surveyed agreed they would use mobile applications we recommended. 40 per cent of the students answered that they were already using the University’s mobile application to access course content and student information.

The European Commission, Joint Research Centre, Institute for Prospective Technological Studies, JRC-IPTS (2011:10) states that personalisation, collaboration and informalisation (informal learning) will be at the core of learning in the future. The central learning paradigm is thus characterised by lifelong and life-wide learning and shaped by the ubiquity of Information and Communication Technologies (ICT). As reflected in figure 2 the HE Academic Community at Oaklands College is mainly centred and focused on the process of personalisation and collaboration. The future of learning will be the promotion of personalised learning plans and tailor-made learning activities. Our Academic Community is working towards meeting the future by offering a range of study skills learning resources which students can choose to use as and when they need. We have added forums to our online Academic Community to encourage peer learning and anticipate the development of professional networks as we engage local businesses in our communities of practice. One of our Academic Community objectives is to improve the professional skills of our students. We are making use of the professional social networking site LinkedIn to model and illustrate professional networks.

Figure 6 Overview of future Lifelong Learning strategies
Initial success

One of the aims of the Oaklands HE Academic Community site is to provide examples of outstanding work to allow students to benchmark their work against that of others. It is a way in which we hope to encourage all our students to aspire to achieve excellence. To find appropriate ‘works of excellence’ we have implemented Awards for Student Academic and Professional Excellence. There are three award categories:

- Award in Academic Excellence for final project or dissertation
- Award in research methods and application
- Award in professional and practical applications

In this academic year ten students were nominated for the Awards and Awards were made to two students for Academic Excellence and Research Methods and Application.

Having been able to make only two awards rather than three confirms our view that there is a need for development of students study skills. That we were able to make two awards is evidence that there are capable students who could be sharing their knowledge and skills to enable more students to aspire to achieve and reach levels of excellence.

Our initial success with the HE Awards has enabled us to develop our own benchmark that nominated works should have been assessed by tutors and graded 70 per cent or above using current University of Hertfordshire marking scales.
Future challenges

The academic community faces challenges to be successful. Students, and staff, must be engaged with at least one or more of the sites (Wordpress website, Facebook, Twitter or Linked In). An initial step will be to introduce all students to the sites during induction at the start of the next academic year and encourage them to register with at least one of the sites to begin receiving messages and updates. A longer-term challenge will be to have students engaged in the core of the community. Wenger et al (2002) identify seven principles for cultivating communities including varying levels of participation. While we must accept that some students and staff may rarely participate, remaining on the periphery, as our community develops we will expect some students to move to the core, helping to sustain and energise the community.

We also anticipate needing to develop private community spaces alongside our current public spaces. This will allow for networking between individual members for as Wenger et al note informal, private exchanges help to develop the public space. As participants come to know each other via informal spaces they come to the public community with a wider agenda and knowledge of what it is appropriate and useful to share.

The public space may also help us with our challenge of engaging local businesses with our community. We expect local businesses to add value to our community. Wenger et al (2002) argue that a dialogue between inside and outside perspectives can help the community see new possibilities and act as agents of change.

Conclusion

The concept of a community of practice is a well-known model which has been in use for almost past twenty years especially in the business community, research and development agencies. It has become an essential model for future learning by the use of web 2.0 technologies and social-networking applications. To be fully developed the Oaklands HE academic community requires further development of several critical success factors such as (1) interpersonal-skills of our students; (2) a higher level of institutional commitment; (3) a change, adjustment and adoption of the new pedagogical methods and principles, and (4) constant research for better and more efficient technological support.

Urgent development of a new set of skills in students, such as networking, team-working, co-constructing, caregiving, co-regulation and co-operation are needed to enable full and constructive use of social networking tools and the University’s Managed Learning Environment (StudyNet). Students need to embrace the concept of collaboration and transformation from individualism to being open, trustworthy and sharing.

An institutional commitment in terms of allocation of resources, recognition of this kind of initiative and recognition in particular of the Oaklands HE academic community as a formal part of the HE organisational structure is a precondition for any further success.

Pedagogical methods and collaboration, a curriculum adjustment and a new set of teacher skills must be developed to meet new challenges. The most relevant of the new skills are: personalised learning processes, collaborative teaching and learning, and an emphasis on the social aspect of learning, more active learning and anytime, anywhere learning.

Innovative uses of technology to enable learning, as our research shows, will create HE communities of practice that are dynamic, flexible and fast changing.
References


Dr Miodrag S. Ivanovic, Lecturer at Oaklands associate College of University of Hertfordshire, miodrag.ivanovic@oaklands.ac.uk

I am teaching as module leader Dissertation, Finance & Development Economics, Strategic Management, on BSc in Construction Management; Organisational Behaviour, Management Principles and Applications on FD programmes at Oaklands. I was Visiting Lecturer at University of Hertfordshire and at West London University. I taught on MA & MBA programmes at ECPD established by University for Peace. I have written several books including Strategic Module Handbook.

Sharon Stone eLearning Developer, Oaklands College
sharon.stone@oaklands.ac.uk

One of my main roles is to support staff and students in the HE department with using the University's Managed Learning Environment, and to encourage and support blended learning.

I have particular interests in the use of mobile technologies and social networking sites to support learning and teaching.

http://academiccommunity.oaklands.ac.uk/
7. Cultivating a viral community of practice to drive institutional enhancement through the promotion of video-enhanced learning, feedback and assessment

James McDowell, University of Huddersfield

Abstract

Building on both the earlier VERiFy project (Video-Enhanced Response in Feedback Loops) and the award-winning VELOCITy strategy (Video-Enhanced Learning Opportunities in Computing and Information Technology), the ReVERiFy project has seen the cultivation of a community of practice on video-enhanced assessment and feedback at the University of Huddersfield. Around the institution, learners studying across diverse disciplines and working in online- and blended-learning contexts now receive video-feedback on their work through a range of mobile, portable and desktop devices; case studies have been developed in a range of subject areas including Art and Design, Psychology, Education, Computing, Modern Languages, Marketing, and Applied Sciences. This paper offers an overview of three of those case studies, highlighting examples of best practice from divergent subject areas, and reporting on both learner evaluations and tutor experience of video-enhancement of the assessment and feedback process.

Introduction

The ReVERiFy project built on the work of previous University of Huddersfield (UoH) Teaching and Learning Innovation projects, integrating two streams of activity to deliver an innovative, technology-enhanced approach to the design of assessment and feedback with the intention of effecting sustainable change at an institutional level. A technology-based stream brought transformation to the assessment and feedback process through the use of video technologies and mobile devices, while a pedagogical stream saw the development of a vehicle to deliver these changes.

Background and Context

A pilot project in the School of Computing and Engineering found learners reporting high levels of satisfaction and engagement with video-enhanced feedback on formatively assessed work. Recognising that there is no one-size-fits-all approach to the integration of video within the assessment and feedback process, the VERiFy project formed part of the VELOCITy strategy, in which a range of techniques in video-enhancement have been identified which can be mapped to different assessment and feedback models across a range of disciplines.
In line with key assessment and feedback principles emerging through the REAP project and others, the institutional Assessment and Feedback Strategy (AFS) at UoH calls for learners to receive timely and personalised feedback which is clear and accessible, and which enables them to learn and to seek further clarification. VERiFy addressed these requirements with a video feedback loop system (see Figure 1, below), whereby learners participate in a continuous and iterative system of formative feedback through a medium with which they are both comfortable and familiar. Encouraging the development of a conversation between learner and tutor, the system allows learners to utilise tutor responses to their work effectively by rectifying errors as they develop, thereby preventing any escalation which might lead to problems in the development of their understanding.

The video feedback loop system enables learners to upload short video clips demonstrating their work and highlighting any problems encountered, and for tutors to respond to these issues and appraise them of their progress, thereby encouraging learners to engage in ongoing dialogue.

Consistent with the findings of the Sounds Good project, the adoption of a non-text-based approach also serves to reduce the impact of learning difficulties such as dyslexia on engagement with feedback and, as a corollary, the assessment process.

A VERiFy case study exploring this approach in a predominantly visual subject area, computer games development, saw short screencast video clips of learners’ work overlaid with a talking-head picture-in-picture of the tutor providing feedback. These video-feedback files were of an appropriate size for distribution and receipt by email or upload to the course e-portfolio system, with the process resulting in efficiency savings for tutors through a reduction in the time taken to produce the feedback, and learners reporting improvements in the quality and timeliness of the feedback received. While this approach saw a rich use of video, simpler uses are applicable in disciplines which require the use of text-based assessment in the form of essays and dissertations, where a simple screen capture of a document incorporating text-highlighting and a voiceover were found to be more appropriate; this technique is described in one of the case studies below.

Project Aims and Objectives

Against the background outlined above, ReVERiFy had a single clear aim of effecting sustainable and efficient institution-wide change through the technological enhancement of assessment and feedback practices, with two streams of activity directed towards the realisation of this aim by achieving three key objectives:

(i) The development of innovative effective examples of video-enhancement in assessment and feedback, and implementation of a conversational framework approach within the institutional AFS
(ii) The expansion of engagement with mobile learning through the use of appropriate devices
(iii) The formation of an institution-wide community of practice on assessment and feedback
The ReVERiFy project adhered to the institutional AFS, while also responding to learner calls for methods of assessment and feedback to be innovative, to inspire and motivate, to encourage dialogue, and to “enhance traditional teaching methods with new technologies” (National Student Forum Annual Report 2009, p.6). To this end, institutional enhancement is being effected through embedding video-enhanced assessment and feedback (VEAF) practices within each of the seven Schools at UoH, and the reach of video-based approaches extended across various disciplines.

**The technology-based stream**

The technology-based stream of activity drew on previous research which has explored opportunities to use audio-technologies to enhance feedback including work emerging through the Sounds Good, ASEL and Duckling projects. It also built on the VERiFy project’s exploration of the potential for video-feedback to engage learners in a conversational framework (Laurillard, 2002), while further integrating the use of mobile devices to achieve greater timeliness, and encouraging learner participation in a dialogic approach to feedback.

While institutions in the USA such as Duke University and the Abilene Christian University have demonstrated a commitment to equipping learners with mobile devices, the provision of mobile devices to all learners within the case study groups was beyond the scope of the project. Notwithstanding this, ReVERiFy has sought to prepare learners, academics and the institution for a potential surge in mobile learning by incorporating a mobile assessment and feedback pilot with 25 learners enrolled on modules from which early case studies were developed. This offered an opportunity to engage learners and academics in evaluations of applications for deployment to a range of mobile devices, and ReVERiFy also worked with UoH Computing and Library Services to identify and prioritise mobile access to key institutional systems which could be leveraged to bring benefits to VEAF practices.

**The pedagogical vehicle**

The pedagogical stream of activity saw the development of a mechanism through which to deliver this technology-enhancement of assessment and feedback at an institutional level. Addressing academics’ reluctance to embrace opportunities to employ technology-enhanced strategies by using a viral approach to grow an institution-wide community of practice (CoP) on assessment and feedback, this pedagogical vehicle saw the establishment of a system of academic School Champions acting as core members of the CoP. Charged initially with the development of case studies highlighting examples of how VEAF practices could bring efficiencies for academic colleagues, Academic Champions are now playing a key role in helping to grow the community by mentoring small numbers of those colleagues to support them through the transition to a VEAF environment.

The development of a community of practice on video-enhanced assessment and feedback founded on a peer-driven, mentoring-based model has seen early-adopters supported in identifying opportunities to implement video-enhanced strategies based on the experience of other academics across the institution. Unlike top-down initiatives which can give rise to the academic reluctance described above, the vehicle for the delivery of institutional change in the area of technology-enhancement based on a viral approach can also act as the vehicle for the delivery of change in the pedagogy and culture of the institution.

**Project Methodology**

In keeping with the methodology employed in the pilot project, ReVERiFy employed a participatory action research methodology involving seven academic practitioners who agreed to act as Champions in each of the Schools comprising the University of Huddersfield: Applied Sciences; Art, Design and Architecture; Business; Computing and Engineering; Education and Professional Development; Human and Health Sciences; and Music, Humanities and Media. The project saw an early investigative and planning phase, combined with two iterative action research cycles; the first of these has seen the development of the initial case studies and identification of academic partners who will expand the CoP during the second phase.
An Academic Champion from each of the seven Schools was identified in preparation for the commencement of the project, and with an institution-wide team assembled, the first phase of case studies which were developed provided a broad spread of best-practice exemplars from across the disciplines. In order to embed VEAF practices as part of an institution-wide initiative to effecting sustainable change, the Project Lead worked with Academic Champions to identify modules where VEAF practices could most usefully be integrated.

The direct involvement of the Project Lead and the seven School Champions as academics with active teaching duties meant that the project yielded ten case-studies in the first year of operation alone, and it is anticipated that by mentoring academic colleagues through the second year using the viral approach, the number of case studies will continue to grow across the institution. It is expected that this number will be supplemented by colleagues choosing to adopt the use of video-enhanced assessment and feedback unilaterally, as has already begun to happen, and it is intended that the realisation of a critical mass of evidence and support will further increase academics’ willingness to embrace opportunities offered by technology to enhance assessment and feedback throughout the institution.

**Case Study 1: School of Computing and Engineering**

In the School of Computing and Engineering, the Project Lead has developed three case studies with members of a Foundation Year 1 cohort enrolled on a core work-based learning (WBL) module, one of which employs the three core elements of the VELOCITy strategy. The Foundation degree course combines two streams of learners, offering a design-based route to the qualification, and a programming-based route; one of the aims of the WBL module is to introduce both design and programming concepts to both streams of learners, with the first semester dedicated to the development of skills in the design and construction of 3D game environments, while in the second semester the work emphasises the development of skills in basic games programming, with learners creating 2D games using a Windows-based programming environment.

In both semesters, learning is scaffolded through the provision of a series of bespoke instructional tutorial videos embedded within the course e-portfolio system, Mahara. Learners are encouraged to develop their own game ideas alongside studio-based tutorial work, which is itself designed to assist progression beyond those threshold concepts (Meyer & Land, 2005), such as terrain (3D) or collision logic (2D), where learners often encounter conceptual and skills-gap problems.

The third strand of the VELOCITy strategy emerged through the work conducted as part of the ALPS-supported Vineyard project, which saw the production of learner-generated content in the form of summative, reflective, self-assessment videos documenting the development of their practical work over the course of an academic year. In an adaptation of this technique, learners are required to produce regular, short screen-captured videos documenting their progress on a weekly basis. These videos, captured using the functionality offered by the screencastomatic.com website, are uploaded to the learner's personal space in Mahara, and as video-diary entries these both constitute an element of the work which is considered at the summative assessment point, and form part of the conversation around feedback which takes place between learner and academic using asynchronous video.

Following the second strand of the VELOCITy strategy, and in an implementation of the video-feedback loop developed through the work of the VERiFY project, short, formative video-feedback or feed-forward is developed in response to learners' video diary entries each week, and this is made available to learners in a private feedback area within Mahara. Previous experience has shown that forming a close relationship between learning materials, video diary entries and video-feedback leads to strengthened learner engagement with that feedback (McDowell, 2011), and learner evaluations have produced further confirmation of strong satisfaction with VEAF:

“Very easy to use and effective, it's better having audio and visual aspects at the same time to explain something.” (Learner, on video tutorials)
“When making things that a player has to interact with like games and software, it’s a lot better to have video feedback to show the exact points in which there needs to be an improvement.” (Learner, on video feedback)

“It makes sense to document the work in this way, showing gradual changes in video to document the work helps point out problems that would otherwise be difficult to describe.” (Learner, on video documentation)

As a subject area, computer games development attracts a substantially higher than average proportion of learners assessed as affected by dyslexia and/or diagnosed with Asperger’s Syndrome (AS), and the benefit to learners in these groups of using VEAF techniques has been substantial. Indeed, a growing body of evidence is emerging which suggests both that (i) AS-diagnosed learners are afforded opportunities to participate in the dialogic process around feedback, and (ii) dyslexia-affected learners are better enabled to engage with video-feedback than audio- or text-based equivalents. A dyslexia-affected learner said of this approach:

“video is now my preferred [feedback] method due to my dyslexia I find it hard to retain text information, I find it much easier to associate work with visual stimulant and audio always helps this process.”

Case Study 2: School of Art, Design and Architecture

In the School of Art, Design and Architecture, the Academic Champion is using VEAF techniques with learners on the BA (Hons) Fashion Design with Marketing and Production, in a textiles production module in which there is an emphasis on gaining practical, hands-on experience of the processes underpinning the development of a garment, from the creation of initial designs through to the production of a finished product. Based in a studio environment where the pedagogical emphasis is on situated learning (Lave & Wenger, 1991) and learning by doing (Schön, 2000), learners are required to design and produce a jacket from mixed fabrics.

The academic used a Flip camera to record summative feedback on assignment submissions, commenting verbally on a range of positive and less-positive aspects of the work while focusing in on the specific areas of the jacket as she inspected the quality of the finished product. The Flip camera exports high-definition, large resolution video files in an uncompressed MP4 format, and distribution of the feedback was identified as an issue by the academic, who initially had to resort to asking learners to view their feedback either in the studio environment or in her office. Prior to receiving the feedback, learners were initially hesitant and self-conscious regarding the use of video to highlight their work and pinpoint any errors, but came to embrace the technique once the video was made available to them and its value became apparent.

In her evaluation of the technique, the academic reported that “video feedback is useful for students in both formative and summative situations … it helps avoid silly questions and misunderstandings …”, and that it was “… and a great way for the external examiner to see exactly the kind of feedback we’re giving”.

While distribution of the feedback was a problem due to the file sizes involved, a solution to this problem has since been identified which will see an iPad or iPod used to record the video feedback, with this then compressed and distributed to learners by email using a version of the iOS app developed as part of the VERiFy project.
Case Study 3: School of Applied Sciences

In the School of Applied Sciences, the Academic Champion has used VEAF techniques with a group of 40 Foundation degree Year 0 learners taking a module on Statistical Analysis. In an assignment which aims to develop the skills required to produce an academic paper in the style of a journal article, learners are presented with a unique data set, and provided with a set of specific requirements which might be expected for an academic paper submission to be accepted in a scientific journal, such as the use of keywords, the inclusion of an appropriate abstract, correct and consistent referencing, and a discussion and conclusion which are based on sound reasoning and argument.

The academic had previously employed the opportunity to record and embed audio-feedback offered by the Grade-Mark system, so was already accustomed to creating and using drag 'n’ drop objects to highlight strong and less-strong points in word-processed documents. Using Adobe’s Captivate software, an audio-enabled screen-capture process allowed the academic to provide personalised feedback on key points of the assignment submissions; this highlighted where the learner had met or failed to meet the learning outcomes, pinpointed aspects of the work which addressed specific assessment criteria, and demonstrated where refinements and revisions such as paraphrasing could be made by invoking the TurnItIn functionality to identify where sentences and paragraphs were found to closely resemble previously published work.

Learners reported strong levels of satisfaction at receiving feedback on their work in video form, and were especially happy with the highly personalised nature of the comments made, with a substantial number indicating that they had used the feedback to make improvements to their paper. The learner evaluation was predominantly positive, however critical feedback on the process highlighted issues regarding the volume of the speaker and his accent, and some learners expressed misgivings regarding their perceptions of negativity towards their work on the part of the marker, although it was also recognised that these perceptions were subjective, and related to the tone of voice heard in the video. This latter point was acknowledged by the academic as a potential pitfall in both audio- and video-feedback, contextualising the issue as deriving from a requirement to provide feedback on over 140 assignment submissions against a relatively narrow set of assessment criteria within a short timeframe. Notwithstanding this, the academic found video-feedback to offer significant benefits to learners, suggesting that “… students needed something to ‘hang’ the audio on to take it on board … video seems the better way of accommodating this”.

Having previously been able to embed audio-feedback directly into an area of the VLE privately accessed by learners, the academic reported difficulties in doing this with the files exported from the Captivate software. It was recognised however that achieving this would require the integration of screen-capture functionality within GradeMark and was therefore outside the scope of the existing system, and the academic found an alternative, manual technique to complete this task. Working with the Project Lead and the School’s learning technology advisor, a technical solution to the issue was identified which allows academics to record and save video-feedback files for a group of learners using an appropriate filenaming convention, and for these files to be transferred to the learner’s space on the VLE upon completion of the batch via an automated process.

Conclusion

The ReVERiFy project is currently half way through its two year lifecycle. During this time a broad range of case studies have been developed, and these case studies are already being used to encourage early adopters to identify opportunities to implement VEAF techniques within their own modules, thereby expanding the community of practice. A series of lunchtime staff development workshops to be held in each of the Schools during the 2012-13 academic session will see both Academic Champions and peripheral members of the CoP working closely with the School learning technology advisor to generate further interest in VEAF and promotion of its uptake by later adopters.
While some academics were initially sceptical regarding the investment of time required to master these techniques, many are now reporting the time-savings which have been realised in terms of reductions in the time taken to produce word processed feedback, while managers have been quick to note the efficiencies achieved in terms of internal moderation and external examination of work and the benefits offered by the production of a trail of evidence. Most importantly however, improvements in learner engagement with the assessment and feedback process have been recognised by both academics and the learners themselves, and learner evaluations of the project indicate a tangible increase in levels of satisfaction with assessment and feedback.

Bio:

James McDowell is a Senior Lecturer and University Teaching Fellow based in the School of Computing and Engineering at the University of Huddersfield. He teaches on the Computer Games suite of undergraduate courses in the Department of Informatics, where his current research interests focus on video-enhanced learning, assessment and feedback, and the uses of mobile technologies in higher education.

James can be contacted at: james.mcdowell@hud.ac.uk.

References


8. The IKEA Approach to Teaching or “Leave the Kids Alone”

By John Murphy and Philip Cowan, School of Humanities, University of Hertfordshire.

Abstract

The large increase in UK higher education tuition fees is expected to lead to more emphasis on students as consumers. Jones (2010) has already described the gap between expectations and deliverable in Higher education and the need for each university to provide detailed metrics on teaching provision, most notably contact hours. (QAA, 2011)

Contact hours may be seen as a measure of Value for Money, however the authors report that in some contexts less may be more. The quality rather than the quantity of the contact may be more important.

The Authors describe an attempt to improve the engagement of students in a course. As a last resort the conventional lecture and seminar approach, involving 24 formal contact hours, was abandoned in favour of an Inquiry Based Learning approach supported by online materials and just two hours of formal contact time for each student.

By moving responsibility for learning onto the student the resultant learning was greatly improved. Students were happy to engage with the process of inquiry, with the acquisition of the required “body of knowledge” coming to them naturally as they researched. Tutors were there to support, explain, give pointers and directions to sources as well as to facilitate shared discovery of resources. While a few students missed the social quality of lectures a similar small number resented having to come into the University just for those two hours.

Background

US academics have been more assiduous in tracking the changes in student behaviour, and it is to American academic studies we look to get a picture of our own university culture.

Perhaps due to the need to take on paid work, the distractions of a ‘media saturated world’, a side effect of extending higher education, or simply a shift in cultural attitudes, but time spent by students on independent study has about halved over the past four to five decades (Babcock and Marks, 2010). This is compounded by a general decline in reading by young people (Jacobs, 2007) and indeed a worrying lack of cognitive development following four years of American college life (Arum & Roksa, 2011).

While many students may regard the achievement of a degree as the passport to an improved income, it could be that independent reading and study is more important in extracting the greatest benefit from their time spent attending an institution. A large proportion of students are graduating from American universities with little or no cognitive development — but the degree certificate is not saving them from the challenges of the job market. Indeed, it is those students who perform best in cognitive tests who go on the ensure they remain off the unemployment statistics (Arum, Cho, Kim & Roksa, 2012).

There is no reason to doubt that a similar picture has developed in the UK. If so, encouraging students to study independently is far better for them than insisting that they attend lectures and seminars with some reluctance and little engagement.

Inquiry based learning has been used in many forms and is supported by theorists going back to Dewey (Dewey, 1938) and Freire (Freire and Freire, 2004). It has become common in Science and medicine and is encroaching into Social Sciences and Humanities. It should be quite natural for journalism students to acquire knowledge by research and inquiry.
The Problem

While delivering the third year module, Journalism, Government and the People in a traditional lecture/seminar format, it was evident that there was a lack of engagement by a large proportion of the students. Attendance requirements set by University Regulations led to seminar groups of around 25 being characterised by minimal group discussion just there to sign the register and go home. Measures to break them into small groups, provide handouts with exercises, reading requirements to be discussed in the following seminar all had limited success. Indeed, the few who did want to speak found their behaviour to be abnormal to group norm and were soon silenced by the silence around them.

It seemed self-evident that the students needed to be required to engage with the subject matter and the tutor’s presence and efforts were having only a minimal effect.

A radically different teaching scheme was devised for the next year which would require the students to read the subject matter and discuss it with each other. The prime purpose of this was to ensure they finished the module having learnt much more about the subject matter than they would have done under the traditional methodology of lecture/seminar. The Lectures would be effectively replaced with online postings of PowerPoint slides together with informal audio lectures downloadable from the Virtual Learning Environment.

A Scheme of group online working was devised so that group discussions were seeded by one students and followed up by the others, each taking in turns to lead.

Circumstances adding extra risks.

To make life more complicated the module leader became seriously ill on the first day of term. Another teacher familiar with the core material took over and delivered what he was presented with, trying to make it work.

At the same time an upgrade of the student record system made it impossible to obtain full lists of students and some had difficulties with some sections of the online material. But the open access approach to teaching materials meant that everything was visible to students whether they were registered or not, except assignment submission.

Appendix A Contains the detailed Programme of Study

Why IKEA?

This well known furniture retailing company was founded by Ingvar Kamperad, who had very strong views about how his company should be run. In 1976 he wrote these thoughts down in a document he called “The Testament of a furniture dealer” (Kamperad, 2007). In this he said that IKEA aim was to improve the lives of the many people. Amongst his views is the idea that the company should be efficient and not waste resources, any resources liberated through efficiency could be made available to improve the service to customers.

To conserve resources its tv advertising is typically quirky and high impact, but not broadcast often. One such campaign in 200 was called The Tattoo Man, [Created By St Lukes, directed by Rocky Morton through Partizan Midi Minuit]. A supposed IKEA manager showed to his staff tattoos on his back. One was of a Wolf. He said: “The wolf reminds us that people can hunt alone”. Secondly a bat: “The bat reminds us that people can find their own way around if there is adequate signage”.

The IKEA approach is to leave the students to find their own way through the desired body of knowledge. Resources and signage are available and help is available if they want it, but they are encouraged to find their own way. Tasks are set to guide the journey and performance in two of these tasks were summatively assessed.
Delivery

The Course opens with an introductory one hour lecture, this will explain the idea of the course. In line with the principles of inquiry based learning it was dominated by questions. See Appendix B for more details. the first lecture should have resulted in the class being divided into groups of about 6 for virtual seminars and live tutorials, however in practice this proved more difficult because of problems with the student registration system.

A body of study material was available through the Virtual Learning Environment, including PowerPoint presentations from the previous year and audio podcasts of about 15-20 minutes roughly matching the subject of the PowerPoint lectures. There was additional material such as links to resources on the internet and books available from the Learning Resource Centre.

The tasks consisted of two essays. The first asked them to described the relationship between the Monarchy, the Prime Minister, the Cabinet and Parliament, and to evaluate it as fit for the 21st century. This was designed not to be overtly political, but rather to set the class exploring constitutional law.

The second essay was set later and dealt with the actual business of government as carried out by a Department of State.

As well as the essays there was a schedule of six virtual seminars carried out through the University’s Computer Based Learning Environment, known as StudyNet. Each week one student would take the lead and produce a brief on a set subject. This was posted in a discussion group and other members of their virtual group would respond and add to the brief. See Appendix C for seminar tasks. Each group of six would have two half hour group tutorials timed to be just before the deadlines for the two essays. See Appendix D for essay titles

Total contact time for each student during semester = 2 hours. 53 students enrolled.

Commentary on execution

Problems with the registration process created many problems with some students unable to comprehend what was being asked. Some of those had missed the first lecture, however some who attended the first lecture did not go on to register. Group formation was problematic because students were “allowed” to choose their own groups. Many did form groups and did not tell the tutor, so were eventually assigned to other groups, some were assigned to groups but did not get any replies to emails seeking contact. The advice to all is “just concentrate on doing your bit and leave others to worry about theirs.”

Email traffic was very intense and several one-to-one meetings were arranged to help students catch up. Most of the confused were quite happy once they realised how simple it all was. No matter how good the signposting some will always get lost.

When the day of the first tutorial was announced the groups were not very cohesive. Some students took the initiative and booked their group slot. Others could not get a response from other group members. Some students reacted angrily to the fact that the tutorials were on a very inconvenient day for them (because it coincided with a driving test) including the comment: “Actually I don’t come in to University on Tuesdays.”

Interestingly UH Humanities modules typically require a two or three hour fixed time slot every week at which 75 percent attendance is required by University Regulations, i.e. 24-36 hours attendance per semester as opposed to two hours attendance per semester for this module. Apart from this it was unclear how the module was going. However the first draft essays that were brought to tutorials showed immediately that they were higher quality than the previous year. It was clear that most students, whatever their ranking in the class has learned the material better on their own, by whatever means, compared to lectures.

Some bookings of tutorials did not go well because some students could not get a response from their group colleagues so a fairly loose arrangement applied during tutorials. People without appointments joined in with small groups, people who arrived early sat at the back and listened. Interestingly many students stayed for the next tutorial, sat at the back and listened.
Feedback from students

Some students said they missed traditional lectures. Typically these were not the top or the bottom students but those with highly adapted academic skills who knew how to make best use of them. Most said they hated the confinement of lectures and were delighted to be set free to conduct their own research. Many reported getting so interested in the subject that they found themselves unable to stop, staying up late at night following links on the internet. Students found their own resources and in particular a better course textbook was identified by a student, this was available as an electronic edition through the VLE and was added to the core text. This new core text was used by most of the class, truly constructivist learning.

Feedback from the tutorials was almost universally positive, for those who attended (the vast majority). All agreed that talking in smaller groups of 3-8 was easier than larger seminar groups (typically 20 or more). The content was clearly focussed on their essays and they went away saying they were more confident.

Some expressed negative views saying that they actually liked lectures. In particular they found that lectures helped them to focus on a subject, something they found difficult working independently. They also saw lectures as a social occasion when they met other students and teachers.

Interestingly the people who liked independent working the most were the more social students who had formed friendships with colleagues. They rapidly formed their own groups and got on with the tasks. Many students said they hardly knew anyone in the module class. It would be interesting to match the social relationships into other data such as use of StudyNet and Attendance rates on previous modules.

The variation in usage of online resources by individual students is shown in Appendix E which is the anonymised usage data for the whole semester downloaded from the StudyNet site.

Tutor feedback

Although the students spent less time in front of a tutor the tutor did not spend less time in front of students. A typical module like this would normally have about 36 teaching hours associated with it plus some marking time associated with the number of students enrolled. The 36 teaching hours were easily taken up with tutorials, one-to-ones and email support time. There was insufficient time to adequately monitor the weekly task and the summative assessment of 2 x 2000 word essays per student produced an extremely high marking load. In particular the effort required to return the first essay, marked and moderated, with useful levels of feedback in time for this feedback to be used in the second essay, was extremely hard.

The tutorial experience was much more interesting as a tutor. People talked who had not spoken for two years in class, asked questions and genuinely seemed interested in the answers.

Outcome

It has proved impossible to gather meaningful quantitative feedback due to lack of response to automated feedback and a School moratorium on surveys due to survey overload.

However subjectively it was clear that the quality of the learning was far superior to previous years just from reading the essays. The level of understanding was far deeper and genuine personal effort was evident.

This was confirmed by the External examiner who stated in his report that the coursework this year was vastly superior to what he had seen the previous year.

Conclusions

There is no evidence that this approach to delivery saves tutor time and therefore money. It may consume fewer rooms but it demands extra resources from the LRC.

More time needed to be invested early on to make sure all students were fully briefed. Many were legitimately confused, partly because of the breakdown of the Student Registration system at a crucial time.
Lessons learned and reactions of students can help form signposts for future years. For example pointing out that attendance is only required for two hours rather than 24 hours. Other issues raised from previous groups can be fed into to the next year’s group.

Spacing of essays needs to take account of need to return first essay with quality feedback

Don’t waste time asking students to form their own groups. Give them a single chance to be with their friends and after than groups are allocated and fixed forever.

Signposting is vital to success. Signposts can be questions.

Weekly exercises must have an element of summative assessment to ensure compliance, possibly peer marked, with failure to contribute being tantamount to absence and costing marks in the final grade.

The attendance requirement needs to be mapped precisely onto this model and defined clearly in advance. Students need to be reminded that their use of Studynet can be monitored and may be used as evidence of lack of engagement.

Instead of failure of attendance the requirement should be Failure of engagement

Appendices

Appendix A

Below is an outline of the format in which the module was delivered. This is information given to the student on the virtual learning environment of the University of Hertfordshire, called StudyNet:

There will be 12 lectures for this module, but only one is in person and on campus — the first, which was to explain the structure of the rest of the course has passed. Thereafter, the lectures will be posted as MP3 audio files on StudyNet for you to download.

The seminars are mostly virtual, apart from three of them. The following seminars are NOT online:

In Week SIX, there will be a half-hour tutorial in the meeting rooms on the ground floor of ‘R’ building to discuss your first assessed assignment — dates, times and room numbers have been circulated.

In Week NINE, there will be another half-hour tutorial on the ground floor of ‘R’ building to discuss your second assessed assignment - again, dates, times and room numbers are to be arranged.
In lieu of the first, second and third seminars, you will be asked to complete a quiz and two questionnaires online. The first is a UK politics quiz which is a self-assessment to help you judge how much you know about the subject before you begin. This will be available for you to complete on the day of the lecture and must be done within one week.

For weeks FOUR, FIVE, SEVEN, EIGHT, TEN and ELEVEN, you will complete a task in a group of six. These groups will be chosen at the first lecture. Each week, in your group of six, one student will take a lead and write a mini essay 200-300 words long and the other five will follow up with a short 100-150 words each. Every student has to take a lead once and this will be decided by them in their groups at the week one lecture. The topic for each virtual seminar will be posted on StudyNet and students will write their responses in the Class Discussion section. The lead contributor for each week will open a new Class Discussion and the other five in the group will comment on what has been written. Students do not need to meet in person to discuss each week's task, but you are encouraged to do so.

The lead contributor for each week should aim to post their mini essay by 5pm on Monday that week, and the other five in the group must respond by 5pm on Friday of the same week. Each group will receive some feedback.

Attendance Requirements

Although much of the course is online, the Humanities 75% attendance requirement still applies, albeit in a different form. Failure to complete three-quarters of the 12 seminars—which are a mix of online and in person—could result in failing the module if there are no acceptable mitigating circumstances.

Appendix B

An example of a first lecture scenario.

It was important at this stage to inspire the class a little bit as if it were made to sound in any way boring the whole course would collapse.

The class was asked some basic questions about the UK constitution.

Tutor: “If a policeman stops you in the street, by what authority does he do so?”

Class: Blank faces. “don’t know”.

Tutor: “So why do you stop then? Tell him to push off and be on your way.”

Class: Blank faces. Eventually someone figures it out “force of arms, he has a taser and cs spray.”,

Tutor: “Correct, but what gives him the authority to use them?”

Class: Don’t Know.

Tutor: “The Queen”

Class: “What!”

Class: “Yes but isn’t it really consent, we all kinda agree to it because we want to police to keep the streets safe?”

Tutor: “Yes, the Queen is in fact the commander in chief of the armed forces and the police are Her Majesty’s Constables. She and her troops have all the guns so they keep the streets safe and stop the country being invaded. And that is the situation in the 21st century.”

Tutor: “Did you know there is no such office as Prime Minister?”

“David Cameron gets his salary for being First Lord of the Treasury, there is no law anywhere which says what the powers of the prime minister are, how they are appointed or even how to get rid of one. The office does not exist.”

A few more constitutional conundrums start to encourage the idea that this module could be interesting.
Seminar Week 7

Would be benefit from having a fully written Constitution like many countries, e.g. US, France, have or is it better just to leave things as they are?

Seminar Week 8

Is the Civil Service where the power really lies in the UK? How do politicians manage to control such a massive administrative machine? How much control does a government minister have over what happens at the sharp end? Should they have more or less control?

Seminar Week 10

Does the Government really have any power over what goes on in the economy? If they do why don't they do something about the current downturn? Is there anything else they could be doing and why are they not doing it?

PS Week 11 will actually be the last week of the term, which means AFTER New Year

Seminar Week 11

Scotland, Wales and Northern Ireland have their own Assemblies or parliament. Should England have its own? Should Scottish, Welsh and Northern Irish MPs at Westminster be able to vote on matters which only affect England? How would that work?

Appendix D - essays

Essay 1

Describe the differing roles of the Queen, the Prime Minister, members of the cabinet, MPs and Peers in the UK. Are their roles and responsibilities suitable for the 21st Century? What role does the media play in upholding or challenging these key figures? Should journalists do more to support them or should they be under even greater scrutiny? Explain why.

Essay 2

Describe the role in government of ONE of the major departments of state (those run by a Cabinet Minister, e.g. Home Office, Foreign Office, Treasury, MoD, Department for Health, Education etc). Explain how the department uses the media in its work and critically evaluate its effectiveness. Analyse how the media coverage given to this department leading up to and since the last General Election has had an impact on its work, give at least three examples.
Appendix E – anonymised StudyNet usage data

Each line corresponds to a student, the number under each resource indicates the number of times that student used or accessed each resource. Least engaged at the top, most engaged, also amongst the best marks in assessment, are at the bottom of the table.

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Table of usage of StudyNet resources. Each line represents a student registered on the course. It indicated the total number of usages of resources by resource and in total on the far right. Most engaged students at the bottom of the table, least engaged at the top. This information was use by the Module Board to help determine lack of engagement.
Bibliography


KAMPERAD, I. 2007. The testament of a furniture dealer. Inter IKEA Systems BV.

QAA 2011. Explaining contact hours: Guidance for institutions providing public information about higher education in the UK %U [http://www.qaa.ac.uk/publications/informationandguidance/pages/contact-hours.aspx](http://www.qaa.ac.uk/publications/informationandguidance/pages/contact-hours.aspx)

Biographies

John Murphy has a BSc in Physics from Manchester University (1980) and is completing his MA in Journalism. He has 30 years experience as a journalist working in national newspapers and magazines. He started teaching in 2006 at Harlow College moving to the University of Hertfordshire in 2008. He is a Fellow of the HEA and is a Lecturer in Journalism in the School of Humanities.

Philip Cowan MA PGCE FHEA, is currently a senior lecturer in Journalism in the School of Humanities at the University of Hertfordshire. He edited a number of local and business publications before beginning his teaching career in 2005. He is also a chief examiner for the National Council for the Training of Journalists.