University of Hertfordshire **UH**

The Learning and Teaching Institute

Blended Learning
in Practice

Contents

Editorial

Welcome to the January 2011 edition of our e-journal, Blended Learning in Practice. As usual we present a mix of research papers, a case study section which this issue considers the use of Windows Photo Story, and our regular 'student voice' section edited by Sally Graham.

A new feature this issue is a discussion piece, with associated online discussion forum, presented by Joy

Phil Porter and Sally Graham

Jarvis. We hope that this will become a regular feature that will spark some interesting online debate. Joy considers the staff development needs within a blended learning environment and presents for discussion the view that the focus of staff development has to date been directed towards teaching 'tools' and that the balance needs to now be shifted towards a wider consideration of the teaching process and the teacher identity.

In our first research paper this issue, Jon Urwin considers the engagement of staff with managed learning environments. Jon presents the pedagogical benefits of enhanced engagement with managed learning environments, but highlights the significant variation in engagement across faculties using his experience of analysing Studynet (the University of Hertfordshire managed learning environment) usage logs. Jon suggests that assessing the barriers to enhanced engagement is an important area for future research.

In our case study section Yvonne Mitchell presents guidance on using Photo Story for Windows within a Higher Education setting. This easy-to-learn technology provides a powerful medium for displaying digital images with associated text and voice overlays and is ideally suited for reflective student work and distance learning applications.

Helen Copsey then discusses how teaching staff meet the needs of mature students. Helen considers the perceptions of teaching staff in terms of the support they believe mature students need and compares this with what mature students themselves identify as their support needs. On the basis of a mis-match between perceptions and actual needs Helen provides recommendations to improve the ability of teachers to better support the specific needs of our mature students.

In our final research paper in this issue, Marija Cubric discusses technology enhanced learning applications and their characteristics and application in Higher Education. Marija reviews innovative e-learning models and applications and pays particular attention to e-learning applications that are deemed to go beyond the

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current 'state of the art'.

Finally, in our regular 'student voice' section Sally Graham ask the question 'How do your teachers teach you?' A survey of our undergraduate student population revealed that the word 'PowerPoint' was by far the most popular response to this question! Sally considers the implications of this for teaching in Higher Education. Placement student Nannayi Dakat provides an overview of her work this academic year as a placement student working within the Learning and Teaching Institute at the University of Hertfordshire.

We hope that you enjoy this edition of Blended Learning in Practice and as usual we would welcome contributions to future editions. Our next edition due in summer 2011 will have the broad theme of 'assessment' and so we would particularly welcome submissions in this area. If you would like to submit to Blended Learning in practice, please contact Dr Philip Porter (p.r.porter@herts.ac.uk).

Dr Philip Porter (Editor, Blended Learning in Practice)

Sally Graham (Student Experience Editor)

Contributor Profiles

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Phil Porter is a Senior Lecturer in Physical Geography and has been active in glaciological research since 1993. After completing a PhD (Leeds) in borehole instrumentation of fast flowing glaciers, Phil took up lectureships at Manchester and Leeds and joined the University of Hertfordshire in 2003. His current research interests concern the response of the cryosphere to environmental change. Phil is also a LTI teacher taking a lead on 'research informed teaching' and is currently working on a HEA funded project to engage students with research fieldwork techniques in geography and environmental science.

Sally Graham

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Sally Graham is CPD Programme Director in the School of Education. She believes strongly in the importance of listening to students' views to improve student participation. In this issue of Blended Learning in Practice Sally contributes to our regular 'student voice' section by considering the question 'what is teaching?'

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Helen Copsey is a Senior Lecturer in the School of Nursing, Midwifery and Social Work at the University of Hertfordshire. In her role, Helen has developed a particular interest in collaborative working and currently coordinates an interprofessional module for health students in their first year of study. In addition to her role in academia Helen continues to practice as a Registered Nurse in the Neurosciences Critical Care Unit at Addenbrooke's Hospital in Cambridge. Helen has a particular interest in intensive care and neuroscience nursing, and prior to joining the University worked as a Practice Development Nurse, responsible for the education of qualified nurses in clinical practice. Helen has now completed her Master of Arts Degree in Teaching and Learning in Higher Education in which she undertook a qualitative research study into the needs of mature students when making the transition into Higher Education.

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Joy Jarvis is Associate Dean (Learning, Teaching and Employability) in the Faculty of Humanities, Law and Education. The focus of her practice and research is exploring different approaches to teaching. Her leadership involves creating effective learning conversations in a wide range of contexts.

Yvonne Mitchell

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Yvonne Mitchell is a Senior Lecturer in Mental Health Nursing in the School of Nursing Midwifery and Social Work at the University of Hertfordshire. Her current research interest is in the utilisation of web 2.0 technologies. In particular, the facilitation of deeper forms of reflection via the re-framing and re-telling of recovery stories from mental illness to well-being, using a variety of digital mediums. The vehicle supports transformative empathic forms of learning in students. Novel and innovative methods engage students as producers and viewers when they present their stories to a variety of audience participants including their own peers. In this edition of Blended Learning in Practice Yvonne demonstrates the use of Windows Photo Story as a means of presenting such stories.

Contributor Profiles

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Marija Cubric is a Principal Lecturer at University of Hertfordshire Business School, where she teaches information systems and project management related subjects. She is also a member of the Learning and Teaching Institute that promotes the use of innovative and effective learning and teaching practices across the University. Before joining academia in September 2004, she worked on system and software development for telecommunication industry in UK and Canada. In October 2009, Marija was awarded the first University of Hertfordshire Readership in the area of e-learning. Her research interest include collaborative learning with wikis, computer assisted assessment, and agile practices in project management and business development. She is a Fellow and Chartered IT Professional of British Computer Society.

Jon Urwin

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Jon Urwin graduated in Physics from UCL and spent several years teaching application development for a commercial training organisation before joining the University of Hertfordshire in 2008. Jon's role includes the development, support and training of StudyNet - the bespoke Managed Learning Environment in use at UH. Jon is a Fellow of the Higher Education Academy and an Associate of the Learning and Teaching Institute at UH and is currently working with other team members to develop innovative monitoring tools to measure MLE engagement.

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Engagement with virtual learning environments: a case study across faculties

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Abstract

The Virtual Learning Environment (VLE) at the University of Hertfordshire (UH) not only supports institutional and national strategies in learning and teaching, but represents a significant investment in capital. Studies show that VLEs offer a variety of pedagogical benefits and usage of such systems can be effectively measured through the analysis of a system's log files. However, although the increase in engagement with the VLE at UH as a whole has been considerable over recent years, there appears to be a wide variation in engagement across faculties, suggesting that tutors of some faculties could benefit from increased support to improve engagement. For example, during each of the academic years under study, the range of student engagement between two particular faculties differed by at least 290%. Having identified faculties that show consistently low VLE engagement, we need to ask why this is, and ask whether there needs to be further investigation into the reasons behind this disparity.

Introduction

A Virtual Learning Environment (VLE) is defined as a piece of software accessible via a web browser which provides an integrated online learning environment, and which can be used to support flexible and distance learning. (JISC, 2010). A VLE is often a component of a wider Managed Learning Environment (MLE), defined as including the whole range of information systems and processes of an institution (JISC, 2010). The software in place at the University of Hertfordshire (UH) is a bespoke system branded as 'StudyNet' and was first implemented in 2000. Although StudyNet is strictly a MLE, this paper focuses purely on the VLE component of the system. StudyNet is available on and off campus 24 hours a day 365 days a year and is widely used by staff and students and usage statistics are gathered automatically into log files on a daily basis.

VLE benefits

A number of studies have shown that VLEs enhance student learning. According to a survey of over 17,000 students at sixty-three US universities, the benefits of integrating such technology include improved learning, convenience of accessing resources, and easier communication between students and tutor (Educause, 2005). Another study at Coventry University found that the use of a VLE improved face-to-face learning, as students were able to spend more time listening and thinking instead of purely capturing content (Brown, 2003). Brown also found that providing material online facilitates more equal learning opportunities for students with special needs, as they are able to adapt the materials to the format that suits them. In addition, the Higher Education Academy notes that VLEs can improve access to resources for disabled students while helping with the broader challenges of increased student numbers and widening participation, (Chin, 2009).

In a similar study, a survey of over 18,000 US students carried out by Educause (2005) suggested that a VLE enables students to "learn more and faster" by rationalising the administrative functions of courses and by streamlining communications, thereby freeing up more time to "focus upon learning-related tasks". The survey also found that students who reported positive experiences with a VLE found that the use of technology significantly improved their interest in the subject matter and their understanding of complex concepts. Interestingly, the features valued most highly by the students surveyed were the ability to track assignment grades and the ability to access online quizzes and sample exams.

Additionally, a report (available at http://tinyurl.com/3943mdv) by the Joint information Systems Committee (JISC) shows how VLEs can be used to support the Seven Principles of Good Practice in Higher Education proposed by Chickering and Gamson (1985). For example, their first principle is the encouragement of student to staff contact and a VLE can assist in this by allowing students to post messages to tutors at a time and place convenient to them (perhaps through the use of discussion boards). The second principle relates to the encouragement of co-operation between students, and VLEs allow this by providing tools such as private work areas where students can work together on a shared presentation, for example.

In addition, the UK Quality Assurance Agency found that 'the introduction of VLEs has led to considerable enhancements in learning and teaching' (QAA 2009: a), and specifically at the University of Hertfordshire the QAA found that StudyNet is 'so important to students that they feel it underpins the culture of their learning experience' (QAA 2009: b). Others have suggested that by allowing better collaboration and communication between students and tutors a VLE offers significant benefits to students on placements or taking part in work-based learning (JISC, 2006). In addition, with an expected increase in courses delivered through distance-learning, VLEs are becoming more important as 'the distinction between distance and local education is disappearing' (Howell, 2003).

Measuring VLE activity

Important work has been carried out into different ways of studying the usage of VLEs. Some academics believe there are particular challenges in trying to accurately measure VLE engagement. Avouris *et al.,* (2004) argue that it is not possible to build a thorough view of online learning activity by merely collecting data from machine generated log files, and that specialist software should be used instead to carry out this task. Furthermore, Garrison and Anderson (2003) suggest that many of the measurements involved in data mining techniques, such as quantitative content analysis and the relationship between individual discussion board messages are too labour intensive. Although a rough tool for measuring engagement could be provided in the form of measuring the quantity of messages posted by students on a discussion board, they go on to suggest that 'a more pedagogically sound assessment of student participation would result [instead] from a qualitative assessment'. However, Brook (2007) carried out a study of log files at three UK universities (the University of Huddersfield, Leeds Metropolitan University and the University of Central Lancashire) and reported that quantitative evidence of user ac-

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tivity does broadly corroborate with qualitative evaluations, and thus meaningful conclusions can indeed be drawn by interrogating web log files in this way.

Engagement variation

In evaluating usage of VLEs however, a number of studies have shown that some universities report wide variations in the levels of engagement across faculties. A large study in the US for example found that students of engineering, business and life sciences prefer more technology in courses than those of other subjects (Educause, 2005). A small study at Kingston University in the UK reported that although students prefer "learning that can be done at home and fitted around social obligations, … some faculties resist integration with VLEs often due to a perception of increased workload". It was also noted that the extent of staff usage of VLEs significantly determined the extent of student use (Heaton-Shrestha *et al.*, 2007).

Another study, carried out at an urban university in the mid-western United States argued that lack of training amongst faculty staff was a barrier to engagement, and that those who are less comfortable with using technology are less likely to use a VLE as part of their course (Reed-Osika *et al.*, 2009). Research conducted by Maclean (2005) at the Pennsylvania College of Education suggests that some faculties emphasise too much on how to "work" the technology instead of successfully integrating the technology into their courses, while a study by Wiesenmayer *et al.* (2008) of over five hundred students across thirty classes at West Virginia University suggests there is no relationship between the amount of technical support and pedagogical guidance and student satisfaction in online courses.

 University of Hertfordshire's VLE

Specifically at UH, one of the key aims within the institutional strategy is to invest in learning technology (http://www.herts.ac.uk/fms/documents/about-uh/uh_strategic-plan_2010-15.pdf). It is clearly important therefore to measure how successfully this aim is being fulfilled, and how consistently and fairly our students are being supported through this aim. This may allow tutors and technical staff to plan learning resources in a more efficient way, ensuring that all students are evenly offered the pedagogical benefits of using a VLE. The purpose of this paper therefore is to ask whether we can learn about the online behaviour of students through the analysis of web usage log files and find any disparity in elearning engagement across the institution with a view to identifying faculties who may need increased support.

The University of Hertfordshire's institutional strategy recommends improving flexible working and investing in learning technology and a report commissioned by the UK government into Higher Education (Dearing, 1997) identified the scope for information technology to improve the quality and flexibility of higher education. It is clear that the usage of StudyNet at UH supports these initiatives, and it is important to ensure not only that students' elearning is supported evenly across the institution, but that the university's capital investment is exploited fully.

All students are given StudyNet accounts upon enrolment and generally use the system in two ways. Firstly, to access general university information (for example university news, careers advice and general learning resources), and secondly to access specific areas dedicated to a particular module. These areas, known as 'module sites' are populated by the uploading of teaching resources by tutors and essentially form the VLE component of the system. These module sites provide access to resources such as documents, presentations, online quizzes and media clips but also offer collaborative activities such as discussion forums and wikis.

Shown below is a typical screenshot of StudyNet, showing an example of a selection of teaching resources in the centre of the screen. The top part of the screen presents two menus in the form of a banner which is present in all areas that a student would navigate, while the left hand area of the screen represents options available within this specific module.

Figure 1. *A sample module within the VLE, showing teaching resources.*

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Methodology

As a Managed Learning Environment, StudyNet acts not only as a fully functioning VLE but also serves other purposes supporting the administrative functions of the University. It is therefore important, when considering usage patterns, to distinguish between these two areas of the system where possible. StudyNet is hosted on-site at UH and the servers which host the system create daily logs of the system usage. The learning environment component of the system is subdivided by course module, such that each module is represented by a 'site' within the system. It is important to note that some course modules do not have a presence in StudyNet, as it is left up to the discretion of individual module tutors whether a site should be set up for their course.

Types of activity

In this study, two different types of user activity are considered; 'module-read' and a page request. For the purposes of this paper, a 'module-read' occurs when a student loads any page from a part of the system specifically relating to a module, known as a 'module site'. A page request is defined as the action of a user loading a web page into their browser (Ince, 2001), and is a unit frequently used in estimating web server traffic and gauging the popularity of web sites. In this paper a page request represents any user visiting any part of the system. Page requests are considered here in order to provide a background against which the module-read figures may appear more meaningful. It also helps us to understand any background patterns that may emerge over the years in question.

In measuring usage of the system, page requests are considered from both staff and students, but module-reads were measured from students only. This is a better measure of the extent to which a module site is being used because tutors themselves naturally generate traffic simply in the process of setting up teaching resources. A module site heavily used by a tutor but infrequently visited by students clearly should not contribute to a measure of student engagement of the system.

A module site has the ability to store many different types of teaching resource, not only documents and presentations, but other types of resource such as media clips and quizzes and areas such as wikis and discussion boards, where students can communicate amongst themselves and with the tutor.

Information recorded in the server's web logs includes the user's unique identifier (from which the faculty and other information can be derived, including the distinction between staff and student), the date and time of access, the amount of data transferred, the Uniform Resource Locator (URL) of the resource accessed and an identifier relating to the student's connection to the internet at that time, known as the 'host'.

Because of the structure of the system, it is possible to interrogate a URL that a user has visited and determine whether a page request relates to the part of the system relating to

a module (in other words the VLE component of the system) or to some part of the system representing the university's administrative functions. Because module sites are all held within the directory titled 'crs', a page request containing this identifier represents a page request on an element of the system dedicated to a particular module, that is, a 'module-read' occurs.

For page requests, usage figures were recorded across all faculties between the academic years 2003-04 and 2008-09 inclusive

For module-reads, usage data (gathered purely for students), spans the smaller range of academic years from 2004-05 through to 2007-2008 inclusive, and for the six academic faculties at UH. (No faculty data was available for 2008-09 and prior to 2006-07 a different faculty structure was in place, making comparisons over time difficult).

Between the academic years 2004-05 and 2007-08 there were six faculties at UH, which for the purposes of this paper have been anonymised and are referred to by alphabetic identifiers A to F. In order to find patterns of usage across faculties, the following data were considered:

1) The total number of students in each faculty
2) The number of module-reads by students for each faculty
3) The hourly and weekday distribution of page requests
4) A comparison between usage of the system specific to module sites and other areas.
5) Distinct hosts served
6) Volume of data transferred

In an attempt to measure a given faculty's relative engagement with the VLE a 'usage index' is calculated. This is defined as a given faculty's proportion of module-reads divided by the faculty's proportion of students in the university. An index greater than one therefore indicates a faculty's engagement is higher compared to other faculties.

Thus,

Usage index = $\dfrac{\text{(Faculty module-reads/total module-reads)}}{\text{(Faculty students/total students)}}$

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Results

The tables and graphs below show how the scale of VLE engagement has changed over the academic years under study, and how the level of engagement is divided amongst faculties. Graphs showing the changes in hourly and weekday distribution of usage are also shown, to provide additional context (Figures 1 and 2).

Table 1. *Total number of students in each faculty for the academic years between 2004-2005 and 2007-2008. These totals are used in calculating the Usage Index described earlier.*

Faculty	2004/5	2005/06	2006/07	2007/08
Faculty A	3850	4030	3970	3880
Faculty B	1420	1970	2080	2100
Faculty C	3800	3370	3260	3080
Faculty D	7380	7810	7760	7360
Faculty E	3220	3490	3380	3290
Faculty F	1620	1540	1680	1460
Total	21290	22210	22130	21770

Table 2. *Module-reads (in millions) by faculty between the academic years 2004/05 and 2007/08. According to this measure, each faculty has increased its engagement during the years for which figures were available.*

Faculty	2004/05	2005/06	2006/07	2007/08
Faculty A	8.43	11.70	12.91	11.19
Faculty B	0.40	1.13	1.46	1.81
Faculty C	8.66	9.91	10.62	10.51
Faculty D	8.70	12.22	14.59	15.11
Faculty E	4.57	6.27	7.31	6.48
Faculty F	3.26	4.53	4.93	4.50

Table 3. *Usage Index by Faculty for the academic years 2004-05 to 2007-08 inclusive. The figures show that the engagement between Faculties C and B differ consistently across the years, by at least 290%.*

Faculty	2004/05	2005/06	2006/07	2007/08
Faculty A	1.37	1.41	1.39	1.23
Faculty B	0.17	0.28	0.30	0.37
Faculty C	1.43	1.43	1.39	1.46
Faculty D	0.74	0.76	0.80	0.88
Faculty E	0.89	0.87	0.92	0.84
Faculty F	1.26	1.43	1.25	1.31

Table 4 below shows over a nine-fold increase in the amount of data transferred across the system over the six academic years where figures were available. In addition, the figures show a steady increase in the proportion of page requests taking place on module sites (the VLE component of the system) and that the number of unique machines accessing the system has more than doubled over the same six academic years.

Table 4. *Volume of data transferred, proportion of requests on module sites and unique hosts served between 2003-04 and 2008-09.*

Academic year	Total data transferred (Terabytes)	Percentage page requests on module sites	Unique hosts served
2003-04	1.46	78.1%	338,287
2004-05	2.5	79.9%	425,006
2005-06	3.05	79.1%	757,997
2006-07	5.42	83.5%	749,089
2007-08	6.48	89.9%	750,172
2008-09	13.83	87.4%	826,646

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Discussion

The units of VLE usage used here have been page requests and module-reads, as outlined above. These are both clearly blunt tools in the field of web analytics and of course do not measure the quality of engagement that each student has with the system. What is clear from the data presented in this paper though is that there has been a significant increase in the volume of data transferred between users' computers and StudyNet over the period of observation. Table 4 shows that the volume of data transferred during the years in question rose from under two Terabytes to nearly fourteen Terabytes. Also, the number of distinct hosts has more than doubled over this period, possibly suggesting that StudyNet usage is occurring from a wider range of computers at different locations and less at fixed locations such as UH's own campus. The same table shows that the proportion of page requests occurring in module-specific areas of the system remained steady in the range of 80% to 90%, (from which we can conclude inversely that page requests for areas relating to administrative functions ranged between 10% and 20%). It is important to note however that not all online learning activity within StudyNet occurs on the module sites and not all page requests outside of modules relate to administrative functions. For example, students' blogs are located away from module-specific areas of StudyNet, and yet form an important part of reflective learning for students who use them.

Figure 1 shows the hourly distribution of page requests for the period between the academic years 2003/04 and 2008/09 and shows a significant shift of usage away from normal daytime working hours. However, some of this shift could be due to an increasing number of students connecting from overseas locations with different time zones. Meanwhile Figure 2, which shows the weekday distribution of page requests for the same two years, suggests that students are using StudyNet proportionately more at weekends. Taken together, it could be argued that the two charts show that students are increasingly taking advantage of the 'anytime, any place' nature of using an MLE.

Regarding faculty usage, there are wide differences in module-reads across faculties, but of course there are also wide differences in the number of students at each faculty, which is why Table 3 attempts to strip out this factor by calculating the 'usage index' for each faculty, as defined earlier in this paper. For example, an index greater than one suggests that for a given faculty the students are using the StudyNet module sites proportionately more than students in the university as a whole, while an index of less than one would show less than average usage for a faculty's students. This table shows that usage students at the Faculty C has been consistently high compared to the university as a whole, while usage from students in Faculty B has been consistently lower in comparison. At its narrowest range (2007/08), Faculty C has a usage index nearly four times that of Faculty B, and at its largest range (2004/05) the respective indices differ by a factor of over eight.
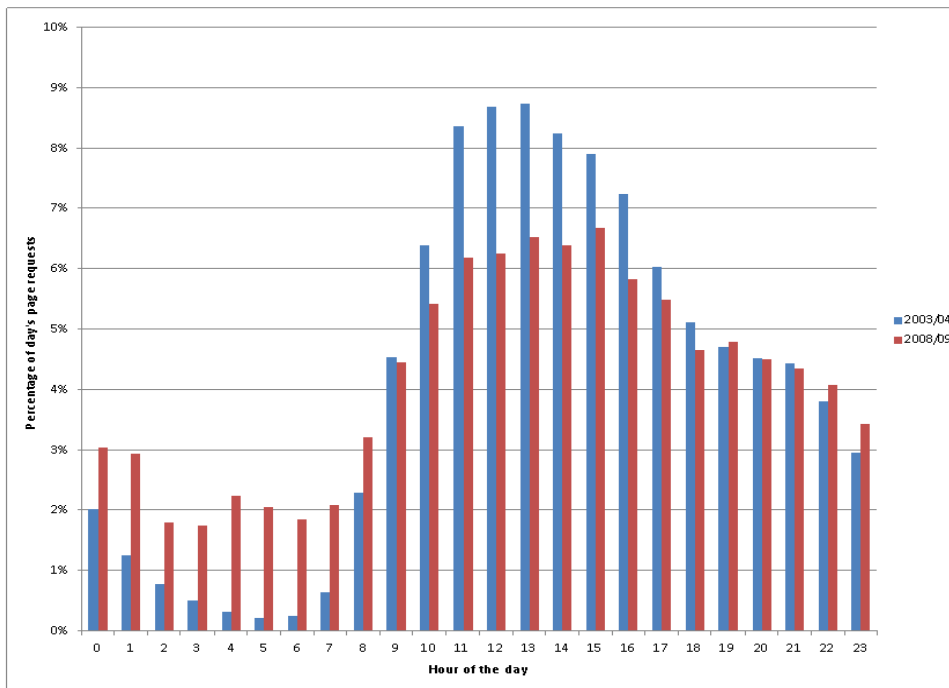
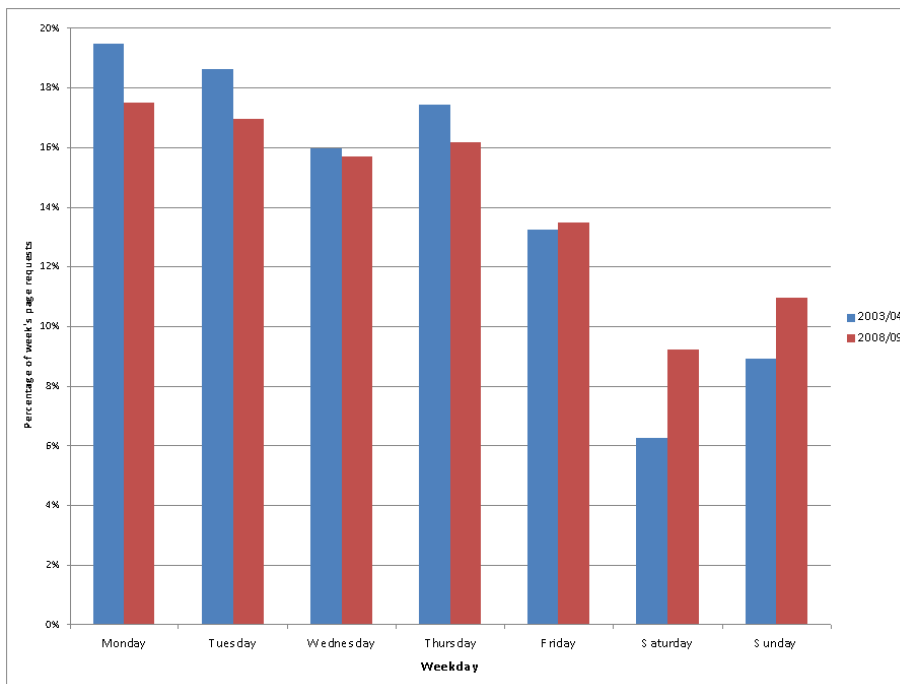Figure 1. *Hourly distribution of StudyNet page requests 2003-04 and 2008-09.*

Figure 2. *Weekday distribution of Studynet page requests: 2003/04 and 2008/09*

Informal feedback from tutors during StudyNet training sessions suggests there may be a number of factors contributing to this effect. As noted earlier in this paper, some studies cite a perceived lack of training and technical support as the cause, while others cite a perception that the preparation time for online materials is excessive. In addition, a study carried out in the United States suggests there is a strong correlation between a student's subject and their preference for integrating technology into their course, with Engineering, Life Sciences and Business favouring the integration of technology significantly more than Humanities students (Educause, 2005). A separate study at De Montfort University in the UK however looked at the impact of a VLE use specifically on students studying a design course, and found that the students viewed elearning positively and did not need additional motivation to use the technology (Brown *et al.,* 2000). The same study though showed that for practical tutorials (a significant feature of the design courses) the preparation time for elearning resources was high, with a ratio of preparation–time to study-time reaching as high as fifteen. Another study carried out at Nottingham University in the UK (Rolfe *et al.*, 2008) also found resistance within arts-based subjects. Specifically, staff in this area felt that "their academic subjects required deeper levels of analysis and discussion that elearning could not provide". The study went on to suggest that this may reflect a lack of understanding of the tools that are available within a VLE, and that any fears that a VLE simply 'spoon-feeds' students could be alleviated by raising tutors' awareness of collaborative tools such as discussion forums and wikis. In addition, a study carried out by Malins and Pirie (2003) suggested that in order to be effective in Art and Design courses, a VLE must complement a pedagogical approach that includes 'experiential, problem based, project based, student centred and team based learning'. More generally, Newton (2002) refers to a number of factors which inhibit the adoption of technology in Higher Education, the most important of which being inadequate infrastructure for access, support and training and a lack of planning at departmental or institutional levels.

Conclusions
As outlined above, measuring MLE usage by means of page requests and module-reads has its limitations, and worthwhile research could be carried out using more refined methods with better tools. For example, Google Analytics is successfully used at Open University, allowing much finer detail to be measured in their VLE usage. In addition, data mining techniques could be employed to examine the possible relationships between users' interaction with StudyNet, such as those that have been carried out by Izso and Toth (2008).

Although the methods may have been simple, a consistently wide variation in MLE usage was observed between different faculties over the years under study at UH. It is possible that some tutors in some faculties are unaware of the pedagogical benefits that such a system offers. Attendance of in-house StudyNet training sessions are optional for tutors, and reflecting on training sessions I have carried out leads me to believe that those who are already motivated to use the system are more likely to attend these sessions. There is clearly a division along faculty lines in VLE engagement at UH, and in order to support students more evenly we need to reach out to those faculties where engagement is low,

and an investigation into the reasons for this disparity is a priority for further research.

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Using Photo Story for Windows

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A digital Photo Story is a visual medium comprising a series of static images viewed using a package such as Windows Media Player, to which music and/or commentary can be added. The Technology is often described as a means to 'show and tell', which perhaps hints at the ease with which children can make use of the package. However, despite the simplicity of creation and use of digital Photo Stories there are clear applications within the Higher Education sector, particularly where traditional modes of delivery may not be available or accessible, distance learning being one example. In this article Yvonne Mitchell provides an overview of the technique, based on her work with Mental Health Nursing students at the University of Hertfordshire.

Education purpose

The educational purpose of making a short digital story can be summarised as:

- To construct, deconstruct, pace and précis a narrative as a reflective narrator

- To zero in on the primary elements of the curriculum

- To support the diverse learning needs of students

- To support student-centred activities and the student voice

- To acquire value; added outcomes over and above the original required learning outcomes

- To support the use cost effective web 2.0 technologies as innovative learning tools.

and rather more specific to the teaching of Mental Health Student Nurses:

- To align visual imagery alongside emotive text to raise awareness and challenge current practice

- To share with student peers as a vehicle of reflection of the realities of practice.

Planning your digital Photo Story

- Briefly and succinctly write your story in a focussed way about 500 words.

- Re-write, edit and repeat.

- Search for your images, they may be downloaded from your digital camera, (Do remember to seek permission to use people in the images). (Alternatively free download sites that support creative commons).

Online digital photo resources

www.flickr.com
www.freephoto.com
www.freeimages.co.uk

Useful tips

- Start with a modest story to gain confidence

- Honour copyright and support creative commons from the outset regarding image downloads

- Keep any text brief and hook onto a reference point to anchor and provide credibility supporting the learning outcomes.

- Enjoy and practice!

Downloads & system requirements

Photo Story 3 for Windows can be downloaded from the Microsoft website:
http://www.microsoft.com/windowsxp/using/digitalphotography/PHotoStory/default.mspx

and from the same site there is a useful step-by-step guide to creating a Photo Story:
http://www.microsoft.com/windowsxp/using/digitalphotography/photostory/tips/firststory.mspx

Minimum system requirements are as follows:

- 256 MB RAM

- 400 MB of available hard-disk space

- Microsoft Windows XP Home Edition, Windows XP Professional, Windows XP Media Centre Edition, or Windows XP Tablet PC Edition.

You will also need a fast internet connection (i.e. not dial-up), access to a suitable microphone to add narratives to your Photo Story, and either speakers or headphones to

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playback the final recording if audio (music and/or narratives) is used.

Step-by-step guide

Several of the screenshots below can be viewed as instructional videos by clicking on the multimedia icon

Importing images

Importing images is extremely quick and simple. Click on the 'Import Pictures…' button and you will then be presented with a file manager style window for you to select images from the folders on your PC. There is no need to select images individually: multiple images can be highlighted and imported up to a maximum of 200. The position of images in the 'story' can be shifted by dragging along the storyboard/filmstrip at the lower edge of the window.

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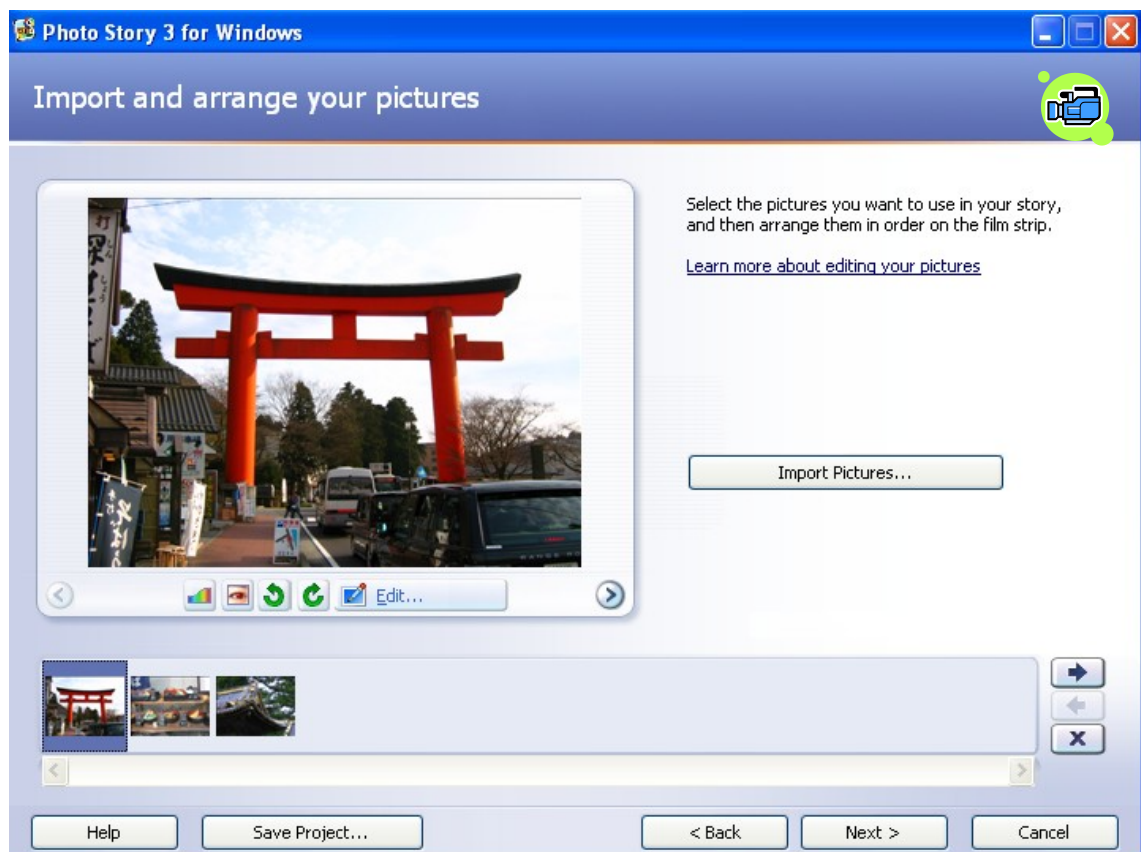
Images can also be edited (albeit to a limited extent) by right clicking on the image in the storyboard/filmstrip or by selecting the buttons just below the image as show in the image below:
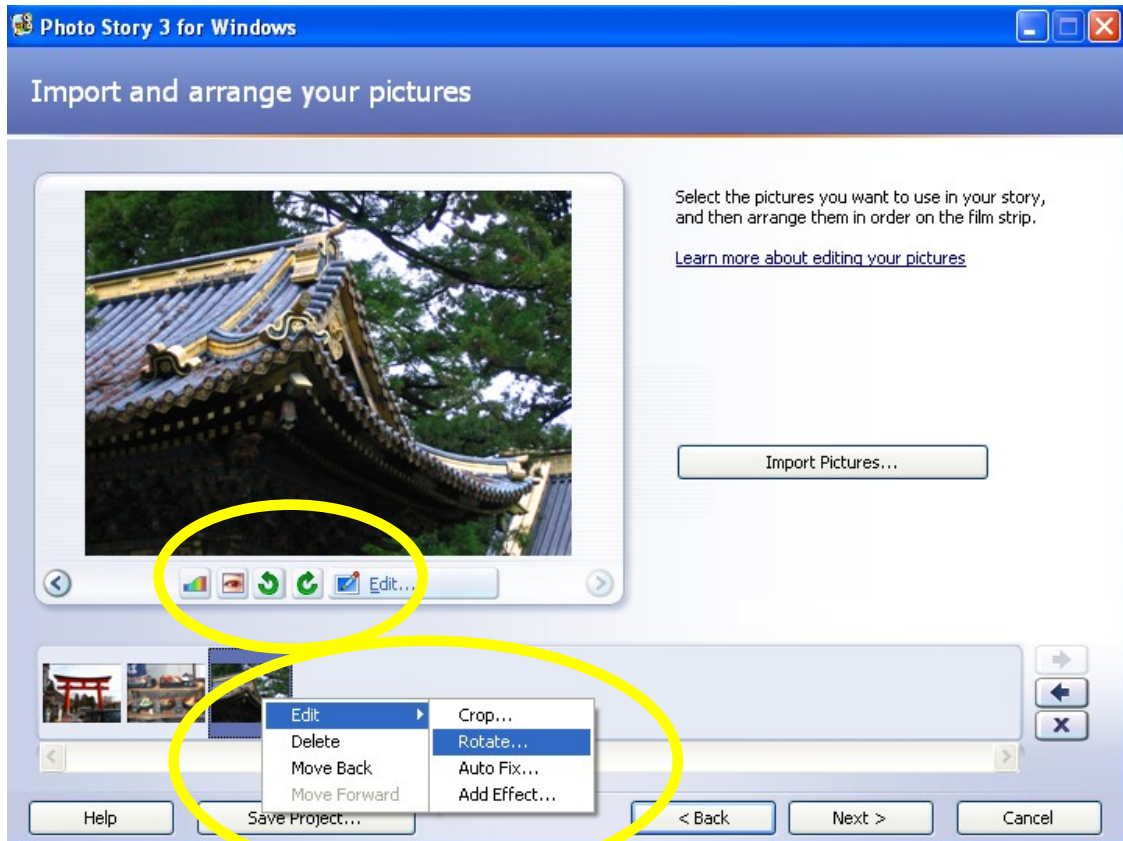
Adding text

Text can be added to appear as an overlay on selected images and the intended use of this function is to add a title to images where needed. Alignment (left, right or centre), position on page (top, bottom, centre) and font attributes (size, colour, font style etc.) can all be readily adjusted using the buttons circled below, while text is typed directly into the highlighted dialogue box:
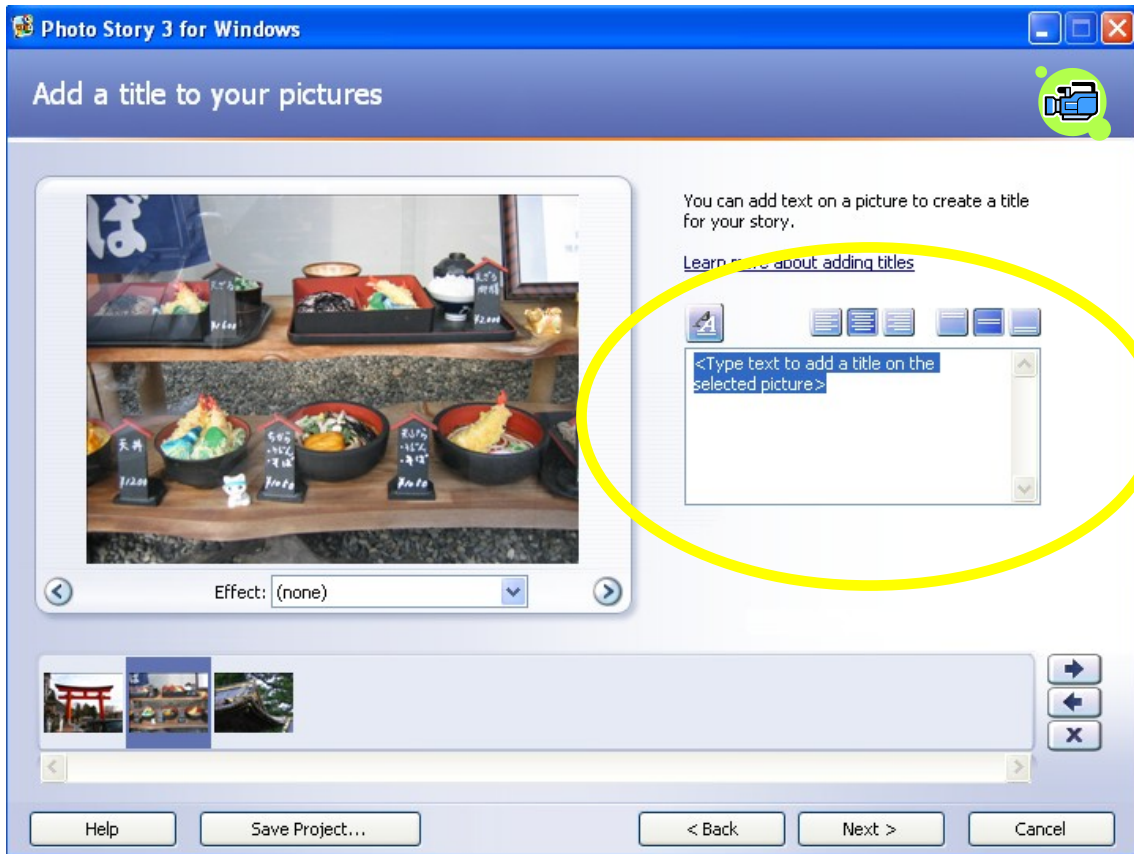
Narration and recording

Once images are chose and text added if needed it is then time to record any narrative that accompanies each picture, or add background music, or both! To narrate your slide simply click on the record button circled in the image below and talk through your slides, advancing them as you go at the appropriate point. Click on stop when the recording is complete. You can also adjust the transition 'style' between images, speed of transition and other attributes of 'motion' all of which are easily previewed prior to starting your recording (circled in red below):
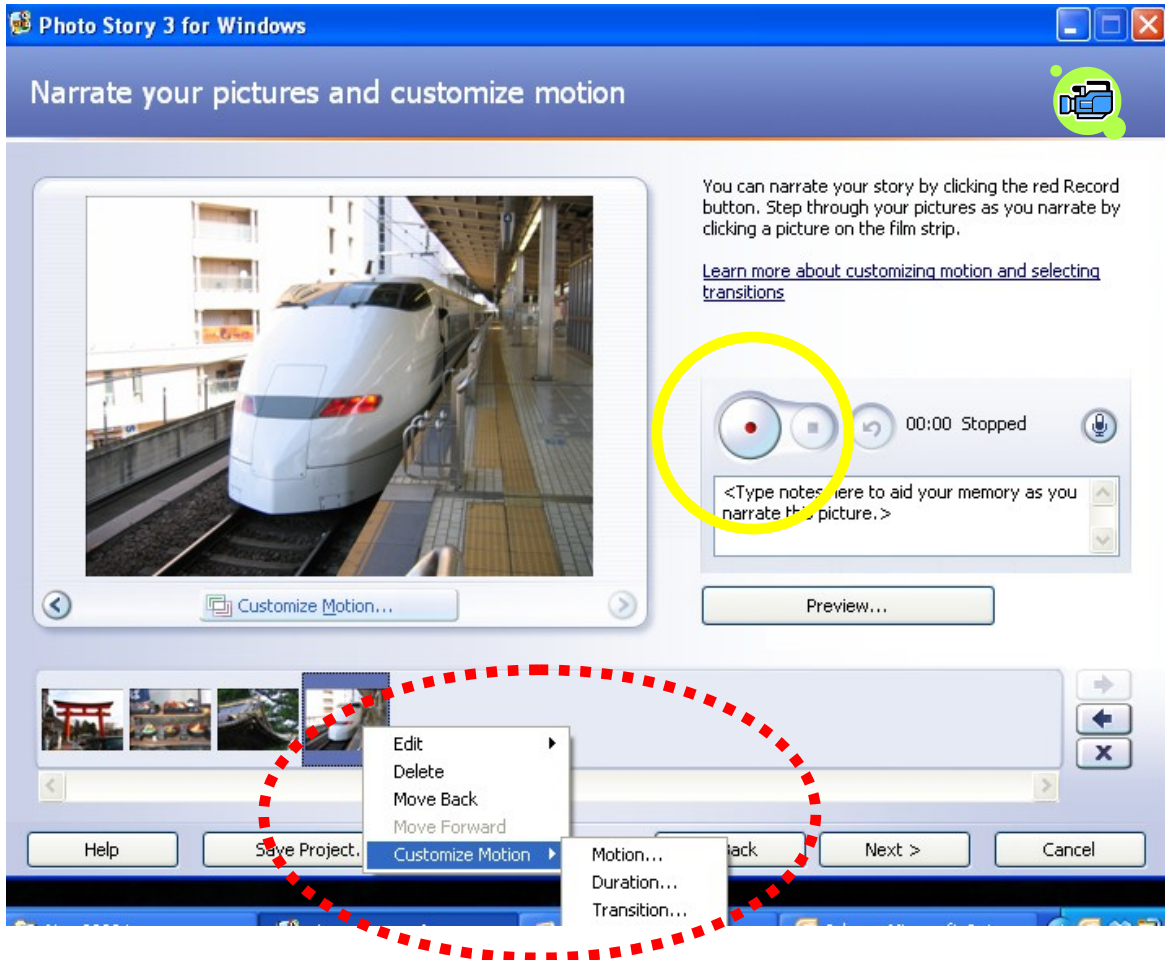
It is also possible to add background music to the Photo Story. You can either upload existing music files from your computer, or create your own using various default genres, moods and styles by clicking on the 'create music' button and once again, this can all be readily previewed:

Finally, Photo Story will ask you how you would like to save your video and where. Once this is determined there is a short delay while the package 'builds' your story and you will then be given the option to view your story, create another story, or exit the application.
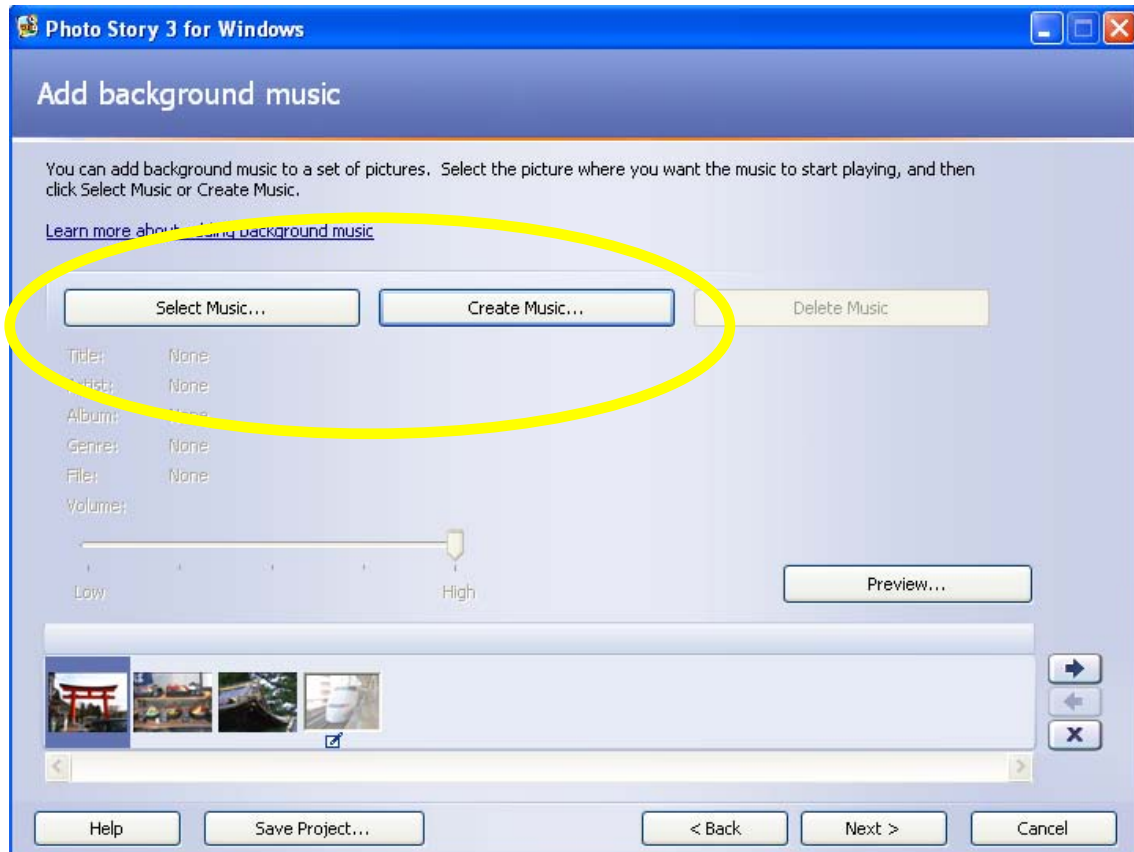
Sample Photo Story

The link below directs to a Photo Story created by a former University of Hertfordshire Student. Annalisa Caddy, now a Mental Health Nurse Practitioner, was able to 'show and tell' her uniquely produced digital story based on the recovery of a 9 year old child from anorexia nervosa to health and well being.

Click icon for Annalisa's Photo Story

29 | Meeting the needs of mature student nurses in their initial weeks at university.

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Abstract

A phenomenological study was undertaken within a university in the southeast of England to explore the experiences of lecturers in meeting the needs of mature student nurses in their initial weeks at university. Initially the study sought to consider the extent to which lecturers' perceptions of mature students' needs correlated with those identified by students (as identified with the existing literature). The researcher aimed to gain a sense of lecturers' experiences with mature students and to identify those factors that enhance or inhibit lecturers in meeting the needs of mature students in their initial weeks at university. Finally, the research aimed to explore the extent to which lecturers tailor their practice to meet the needs of mature students.

Five semi-structured interviews were undertaken with lecturers holding a range of positions within a School of Nursing, Midwifery & Social Work. Interview transcripts were analysed using Colaizzi's (1978) framework for the analysis of phenomenological data. Whilst mature students were considered to be a diverse group, lecturers agreed that mature students needed and valued face-to-face contact with lecturing staff and when interacting with staff within the University as a whole. Some participants reported that time and resources presented a barrier to achieving this. Lecturers reflected upon the reliance on technology in Higher Education which they identified as a particular cause of anxiety for mature students. They acknowledged the potential difficulties in balancing home and university life for mature students. Lecturers believed that mature students demonstrated commitment to the course, but needed timely feedback to develop confidence in their ability. Lecturers reported that they themselves had received little formal training in meeting the needs of mature students but relied heavily on both their professional and personal experiences to guide them. Lecturers agreed that the transition into Higher Education presents a number of personal and academic challenges for mature students with induction week identified as a particularly stressful period for all students and therefore in need of a more detailed evaluation.

Introduction

The White Paper 'The Future of Higher Education' (UK DfES 2003a) included a clear commitment to widen participation in Higher Education (HE), and there continues to be a focus on so-called 'inclusion' which seeks to enable the full and equitable participation in HE for all prospective students, notably underrepresented groups (HEA, 2010). One such group is mature students and whilst definitions of mature students vary, the typical definition of a mature student in the UK (used for financial purposes) is age 25 years and over before the first year of the course (Directgov, 2010). Data from the University and Colleges Admissions Service (UCAS) indicates that the mature student population accounted for approximately 15% of all applicants in 2009 (UCAS, 2010).

There is evidence to suggest that mature nursing students approach their programme with commitment and often a wealth of experience (Montgomery *et al.*, 2009). Moreover, it has been reported that mature students are more likely to complete their programme than their younger counterparts (Anionwu *et al.*, 2005; Shepherd, 2008). However, mature students frequently face challenges relating to finances (Brown & Edelmann 2000; Howard 2001; Kevern & Webb 2004), childcare (Glackin & Glackin 1998; Kevern & Webb 2004; Lauder & Cuthbertson 1998) and the balancing of multiple responsibilities (Allen, 1993). It is therefore apparent that mature students may face different (although not necessarily greater) challenges than younger students. It is recognised that the initial transition to university is significant for all students (Scanlonet *et al.*, 2007), and that the first months at university are critical in a student's progression. For mature students this transition can involve significant adjustments including marked changes to their role, status, lifestyle and income.

It therefore seems appropriate for Higher Education Institutions (HEIs) to examine and optimise the support offered to mature students, particularly in their transition to university. In 2008, the Higher Education Academy (HEA) reported that not all mature students feel that their needs and expectations are being met, and that some institutional practices may need to be developed in this area (Yorke & Longden, 2008). However, little research has been conducted into the personal practices of lecturers in meeting the needs of mature students. Whilst there has been a recommendation that mature students receive extra time and support (DfES, 2003b), less is known about the extent to which lecturers can and do offer this to their students. Moreover, it seems pertinent to establish whether lecturers and mature students share a common understanding of the main challenges faced by mature students. Otherwise, there risks being a tailored support system which fails to meet their actual needs. This study was therefore concerned with exploring these factors in one HEI in southeast England. The overall aim of the study was to explore the experiences of university lecturers in meeting the needs of mature student nurses in their initial week at university, and within this four key objectives were identified as shown in table 1 below.

Table 1. *Research objectives.*

I. Consider the extent to which lecturers' perceptions of mature students' needs correlate with those identified by students (as identified within the existing literature)
II. Explore the experiences of lecturers in meeting the needs of mature students in their initial weeks at university
III. Identify those factors that enhance or inhibit lecturers in meeting the needs of mature students in their initial weeks at university
IV. To consider the extent to which lecturers tailor their practice to meet the needs of mature students

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Whilst this study examined the needs of mature nursing students, it is believed that many of the findings are applicable to mature students pursuing a range of academic programmes.

Literature review

The transition into HE has long been significant for any student, and involves integration into the academic and social spheres of the university (Tinto 1975). Research on the first-year experience indicates that many students encounter difficulties in the transition to university with feelings of loss and lack of identity (Scanlon *et al.*, 2007). Due to their living arrangements and other commitments, mature students are often less able to interact with the social and academic community at university (May & Bousted, 2004; Tinto 1993), leading to potential social isolation. The early part of transition to university is thought to be particularly stressful, and evidence suggests that the majority of those students leaving HE do so in their first year (Yorke, 2000). Bolam & Dodgson (2003) suggest that it is therefore important that during this stage students are provided with a high level of continuous support. It has been acknowledged that support networks are crucial in the students' successful transition (Forbes & Wickens 2005; Mackie 2001; Thomas 2002), although it would appear that existing literature has considered student-to-student support networks in greater depth than support offered by university lecturers.

McGivney (1996) suggests that the first step towards improving students' experience of HE is for HEIs to recognise and acknowledge the needs of mature students. A qualitative study by Carney & McNeish (2005) identified that mature students perceived their challenges to be different (than those of younger students), and included their extra personal commitments, lack of time, academic work (notably a different educational background), socialising with younger students, and management of finances. The mature students interviewed recommended that the institution provide a specific support system for mature students, giving the example of an access point for information on finance, debt and part-time working. There is evidence that developments have occurred in this area with the introduction of special pre-entry and induction activities for mature students (including a residential induction conference), the appointment of mature student officers and the establishment of specialist mature student services in some universities across the northeast of England (Bolam & Dodgson, 2003). Similarly Trinity College in Dublin have developed a 'welcoming programme', which focuses on socialisation of mature students as well as the development of study skills (Fleming & McKee, 2005). It is important to note that despite the aforementioned supportive initiatives for mature students, there are still reported shortcomings in the provision of support for mature students, particularly in relation to finance, the availability of childcare, the role of the tutor (which needs to be formalised and standardised in relation to providing pastoral and academic support for mature students) and recognition in timetabling of the needs of mature students (Bolam & Dodgson, 2003).

Recent studies investigating lecturers' attitudes towards mature students are limited. Back in 1980, Boon suggested that academics believe that mature students perform better overall, and have a positive influence on the course. There has also been little exploration of university lecturers' experiences in meeting the needs of mature students. It has been established that in order to fully embrace mature students within the system of HE, staff need to understand their experiences (Mercer & Saunders, 2004). Kelly (2005) revealed a high level of understanding by lecturers towards the pedagogical difficulties of mature students (which included a lack of confidence and conflicts with previous experience or learning methods), yet the dearth of staff development initiatives in this area was highlighted. The study revealed that the appropriate employment of teaching strategies (namely a diverse range of andragogical and pedagogical approaches which recognised the experience and prior learning of mature students) stemmed from experiential learning, personal insight and awareness on behalf of lecturing staff (rather than formal training), and therefore the authors recommended further staff development initiatives. In this study the researcher sought to explore lecturers' perceptions of mature students' needs and the extent to which they tailored their support for this group within the HEI under investigation.

Methodological Approach

This study was concerned with exploring and understanding lecturers' experiences of supporting mature students, and thus phenomenology was considered an appropriate research approach. It was not attempting to develop prescriptive or predictive theory, but rather to describe the actual experiences of lecturers working in this area. Interpretive phenomenology proposes that it is the relation of the individual to his or her 'lifeworld' that should be the focus of phenomenological inquiry. Heidegger (1962) asserted that humans are embedded in their 'lifeworld' to such an extent that subjective experiences are inextricably linked with social, cultural and political contexts, and thus humans have 'situated freedom' meaning that individuals are free to make choices, but their freedom is not absolute as it is circumscribed by the specific conditions of their daily lives (Lopez & Willis, 2004). This was considered particularly relevant, given that lecturers working in HE are undoubtedly linked to the influences of the context in which they carry out their everyday work.

The study took place in a School of Nursing, Midwifery and Social Work at a university in the southeast of England. Ethical approval was sought prior to the onset of the study and informed consent obtained from all participants. As in much qualitative research (Curtis *et al*., 2000), this study employed a purposive sampling approach allowing the deliberate selection of information-rich cases that gave rise to data relevant to the research aims as described in the introduction (Patton, 1999). Five participants were selected who had direct involvement with first year students during the transitional period; a Senior Lecturer (Mental Health Nursing), Pre-Registration Nursing Lead, Programme Tutor (Nursing Diploma), Admissions Tutor, and the Programme and Achievement Officer. Semi-structured interviews were considered to allow a wealth of detailed information to be obtained. As a phenomenological approach seeks to explore lived experiences of participants, the emphasis was on participants talking freely about their experi-

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ences of supporting mature students. Therefore prompts were devised (rather than a prescriptive interview schedule) only to start and guide the discussion if needed. These included the background of the participants, their experiences in working with mature students, their perceptions of mature students' attributes and challenges, any staff development opportunities that had enhanced their skills in supporting mature students, and any ways in which their practices were tailored to meet mature students' needs.

Other qualitative data collection techniques such as questionnaires may not have allowed such full and complete expression due to restricted space and the absence of a researcher to prompt as appropriate (Appleton, 1995). The researcher in this study believed that in order to present a clear auditable trail for the reader, it was beneficial to apply a recognised framework to data analysis. Colaizzi's (1978) framework was deemed most appropriate for this study and was favoured due to its logical approach to data analysis, and emphasis on moving back and forth between meaning statements and successive hypothetical lists until themes are accurately reflected. The stages followed within this framework are shown in table 2 below.

Table 2. *Colaizzi's (1978) framework.*

1. All interviews are transcribed verbatim and read in order to get a feel for them.
2. Significant statements and phrases that pertain to the experience under investigation are extracted
3. Meanings are formulated from the significant statements
4. Significant statements are organised into clusters of themes
5. The themes are used to provide a full description of the experience
6. Researcher returns the description to its original source for confirmation of validity

Findings and Discussion

Following analysis, a number of clear themes emerged. This paper discusses the three themes identified below which are considered most relevant to HEIs across the sector and are show in Figure 1 below.

Perceptions of mature students' needs	Support for mature students	The transition to Higher Education for mature students
• Mature students need and value face-to-face contact with lecturers • Mature students need support with information technology • Mature students need information to allow them to balance student & family life • Mature students need to develop confidence. Effective and timely feedback is important in achieving this	• Mature students develop effective peer support networks • Varying perceptions of the quality of support for mature students offered by the HEI • Lecturers rely heavily on their own experiences when supporting mature students • Lecturers' perceptions of the usefulness of existing training programmes is varied	• The transistion to University is seen as significant for all students • Induction programmes should be delivered in smaller groups to allow the development between staff and students

Figure 1. *Summary of key findings.*

Perceptions of mature students' needs

Overall participants believed mature students to be a diverse group due to their varying age, experiences, educational background and ethnicity. However, despite this diversity, participants unanimously reported that mature students needed and valued face-to-face contact with lecturing staff. This supports the findings of Steele *et al.*, (2005) who conducted an exploratory interview-based study and reported that mature nursing students valued the pastoral and person-centred support given by their tutors. Participants reported that mature students were generally an articulate group, who were more likely than their younger counterparts to seek support and request tutorials. One participant reported:

"I firmly believe that they need to have an outlet that they can go to… and sometimes it's them offloading and transferring stuff onto us as lecturers… my input on that could be the difference between them continuing on the programme or falling off the programme" (Participant A)

Participants in this study therefore recognised the significance of their role in the provision of pastoral support. However, the participants did acknowledge that this was time

consuming, and that a more formalised structure to this support would be beneficial. One participant suggested the addition of pastoral support to the timetable.

All participants referred to information technology (IT) as being one of the greatest stressors for mature students entering HE, and often reported an over-reliance on the use of technology in the early weeks for providing students with key information. It was evident that participants took measures to address this need to some extent. One participant reported:

"I took them down to the university resource centre to get them to realise it was a place that was actually going to support them...and I did that several times…and I think I need to do that even more" (Participant D)

Participants referred to mature students being Prensky's (2001) 'digital immigrants' (those who have not grown up in a technological world), and in accordance with existing literature believed that mature students were significantly less likely to report self confidence in using technology (Jeffries *et al.*, 2007). Participants in this study suggested that the integration of technology needs to take a structured and gradual approach for all students to allow it to enhance learning, rather than become a cause of immense stress in the early weeks.

A further need of mature students identified by participants was the ability to balance the demands of both family and university life. Participants talked extensively about issues of childcare, finances, and the general challenge of being a mature student. These findings concur with those of Montgomery *et al.* (2009) who conducted a questionnaire-based study with mature students and revealed that financial issues and balancing childcare presented the greatest challenges.

Participants unanimously reported that mature students approached HE with exceptional organisational skills, strong coping mechanisms and a conscientious approach to their studies. Participants attributed this to the realisation of a lifelong ambition which resulted in mature students being dedicated and determined to seek all information available to them.

"… usually when you walk into a classroom in the front row you would normally have a row of four or five mature females, usually together, they are so intense in everything that is happening, they have put this programme of study off for so many years, they are now here… and they want to know exactly what is going on". (Participant A)

This reflects the work of Shanahan (2000) who also reported the great significance of a place in HE to mature students (which was often seen as a catalyst, particularly for mature women, to change the direction of their lives) and the subsequent additional pressure to succeed. Despite their many attributes, participants saw the mature student group as needing encouragement and reassurance in developing confidence in their

ability. In relation to feelings of anxiety and uncertainty amongst mature students, one participant reported:

"They often seem more anxious right from the beginning and uncertain, and almost like they don't deserve a place" (Participant D)

Participants discussed the role of feedback in enhancing the self-esteem of mature students and recognised that following early formative feedback mature students are more likely to develop their confidence if adequately supported. This also reflects the findings of Mercer (2007) who reported that mature students' self-reported growth in confidence became more salient as individuals' academic careers progressed.

Support for mature students

All participants described the supportive networks that mature students rapidly develop in the transitional period. It was acknowledged that invariably mature students develop networks with other mature students. This was seen as a 'natural' pattern of human behaviour, and participants believed that these networks were formed independently of staff intervention. In accordance with previous findings (Forbes & Wickes, 2005; Mackie, 2001; Thomas, 2002), all participants viewed these social networks as crucial in the transitional period and prevented the potential isolation that younger students may experience.

In relation to their own needs when supporting mature students, staff reported relying heavily on their own personal and professional experience to guide them. There was little awareness of any formal guidance for lecturers or HEIs in meeting the needs of these students in particular. These findings further those of Bolam & Dodgson (2003) who conducted staff interviews, a student survey and focus groups with mature students, and concluded that staff training could be used further to make tutors aware of the problems that mature (and other students) may face. However, the results of the study presented here would suggest that participants had valuable insights into the problems that mature students may face (when compared to findings drawn from existing studies directly involving mature students), but have not always received the training required to support mature students in dealing with them. This is in accordance with the findings of Kelly (2005) who conducted a similar small scale study involving interviews with lecturers and also mature student focus groups to investigate the experiences of lecturers working with mature students in a technology institute. Kelly (2005) found that staff have sound insight into the challenges faced by mature students but have limited staff development training in this area.

The transition to Higher Education for mature students

All participants viewed the transition to university as a great challenge for mature students. This reflects the findings of Scanlon *et al.*, (2007) who conducted interviews with first year students and reported the difficulties when making the transition to University,

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particularly in relation to the 'loss' of a previous identity. All participants who referred to the induction week viewed it as a most challenging time which was often chaotic for all students. However, it was acknowledged that the life experiences of mature students may equip them to deal with the process more ably. One participant in this study suggested that small group work would allow staff to meet individual needs of students:

"If I had my way we would induct over say a 6 hour period and we would have 50 students a day. We could really look at individual needs and could do it with students according to school leavers, more mature, gender, ethnicity… and therefore meet their needs more clearly" (Participant E)

It is interesting to note that other participants reflected on the benefits of integration between mature and 'traditional' students. Some participants considered mature students to offer a parenting role to younger students (as reported by Waller, 2006), whereas younger students were considered to possess a range of skills that could be shared with mature students. It is therefore unclear as to whether segregation is preferable in the early weeks at University.

As reported by other HEIs (e.g. Bolam & Dodgson, 2003; Greer & Tidd, 2006) this study revealed the recent launch of a pre-induction event. However, in contrast to the above studies, at this university all potential students were invited to the university two weeks prior to the commencement of the programme (as opposed to an exclusive event for mature students). This had been conducted twice, and was thought to be valuable to all who attended in allowing them to meet staff and fellow students. Participants unanimously reported that resources (notably time and staff availability) presented the greatest barrier to developing these further to include additional networking activities.

Conclusion

Lecturers interviewed in this study believed that mature students need one-to-one support and reassurance in the early weeks. In accordance with the views of mature students (as identified in the existing literature), they recognised that mature students often balance numerous roles and therefore need accurate information to enable them to plan their studies. They believed that the intense use of information technology from the start of the programme presented a particular challenge to mature students and considered there to be greater scope both within the School and wider university to support students in this area. Whilst lecturers enjoyed and valued the contribution of the mature student group, they identified time and resources as being the primary barriers to offering adequate pastoral and academic support. This was particularly relevant to the induction period, which was seen to be chaotic for all students and in need of a more detailed evaluation. When discussing the extent to which lecturers tailor their practice to meet the needs of mature students, it was evident that lecturers primarily offer an outlet for mature students to voice their concerns.

Limitations

Whilst the aim of this study was to explore the experiences of university lecturers in meeting the needs of mature student nurses in their initial week at university, it must be acknowledged that the scale of this study and the focus on nursing students may limit transferability to other HEI settings.

The use of purposive sampling allowed the researcher to approach those lecturers who had experience in working with mature students. However, it should be recognised that the roles occupied by some participants required them to work with students in particular and often extreme difficulties, whose progression on the programme was vulnerable. A larger sample may have captured the experiences of lecturers who had more general involvement with these students on an everyday basis.

This study has endeavoured to draw comparisons between lecturers' experiences, and the existing literature which has directly explored mature students' views. To maximise the value of this study, it would have been beneficial to conduct concurrent research directly involving mature students in this HEI, thus allowing comparisons between the experiences of the students and lecturers.

Recommendations

The findings of this study suggest that further one-to-one time with lecturers would support mature students greatly in their transition into HE. It would therefore seem appropriate that this support is given recognition by lecturing staff, and that systems are developed to allow this support to be offered in a more structured way. Staff appear to be offering mature students considerable pastoral support, yet rely heavily on personal experiences rather than formal training. The findings also suggest that mature students require greater support with information technology skills prior to commencing the programme. This small research study suggests that technology should be 'phased in' in the transitional period to allow mature students to develop confidence and skills in its use. This study also presents a strong rationale for reviewing and improving the induction week. Finally, it is recommended that there is a need to research the mature student group in greater detail, recognising that this is not a homogenous group. Further research would allow the explorations of the specific experiences of these subgroups and the particular challenges they face.

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Teachers, teaching or tools: what should be the staff development focus in blended learning?

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I recently attended a conference on the future of learning in higher education and in business contexts. There were workshops on a range of learning and teaching approaches including explorations into the roles of curiosity, play, narrative, metaphor and experience. Where was the technology in this learning future? Was it invisible because it was seen as just a tool that was available to be used, or was it seen as inappropriate in the service of learning and teaching?

Currently a strong focus in higher education is how to use different technologies/how to use new teaching tools. This is similar to the situation where an apprentice craftsperson needs to learn how to manipulate tools in order to create a product. How to manipulate tools is not the main focus of the apprentice, however. The apprentice needs to 'be' a craftsperson who looks at materials and tasks in a particular way. The apprentice takes on a craftsperson identity. At the same time s/he learns to identify the purposes and processes of creating, how to develop ideas and to become skilled at the craft. In this approach there become three areas of focus: the identity, the craft and the use of tools.

One could argue that in teaching in higher education we also have three areas of focus: the teacher identity, the teaching process and the tools we use. I would suggest that currently we are focusing particularly on the tools and need to redress the balance by considering who is using these tools and what they are using them for.

To develop an identity as a 'university teacher' requires a way of paying attention to the process of our teaching, to notice and respond to student learning, to enquire into and evaluate what we do, to develop a 'scholarship of learning and teaching' in higher education. Teaching may well be only part of our academic identity but if excellence in learning and teaching is to be a key mission of higher education then we need to pay attention to the development of university teachers. This would involve raising the quality and profile of research into learning and teaching, using resources to enable people to share scholarship in the field and providing opportunities for staff and students together to explore philosophies and practices of learning and teaching. As Skelton (2009:110) argues members of staff need to be able to be part of 'pluralistic, deliberative cultures where not only methods of teaching but also pedagogical theories, values and policies can be shared'.

The teaching, designed to bring about learning, is a key purpose of a university and needs to be a focus of our energy. We need to be analysing what we do in order to identify and generate effective learning experiences. Can we explain to colleagues and students why we teach the way we do on campus and how this relates to how we teach online? As Savin-Baden (2008:82) asks 'What do we mean by pedagogy in online spaces?' Do we know what we want to achieve with our teaching tools, be they flip-charts or wikis?

Have we evidence that what we say and think we do is what really happens in practice? New tools can, of course, open up new teaching possibilities. We need, however, to have a teacher identity and teaching philosophy to recognise this. Staff responses to a student

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http://tinyurl.com/6bevh4t

blog, for example, are likely to be more informal than written feedback on an assignment. How does this influence the learning? How does this affect the relationship between staff and students and their perceptions on what it means to teach and to learn? How are we reflecting on the integration of new tools into our existing understanding of teaching and what processes are we using for noticing how new tools are influencing this understanding?

Ultimately 'Who am I?' and 'What do I do?' are more important questions to answer than 'What tools do I use to do the job?' It could be argued that some of us are only apprentices in terms of the use of new technological tools, and not in being a teacher and in teaching, and that therefore the focus on learning how to use these tools is valid. However, could we really say that we have taken on teaching identities? How much do we know about how we are teaching compared to what we are teaching? Do we really have cultures in Schools and Faculties in which we articulate and share with colleagues and students ways in which learning will be facilitated and evaluated on modules and programmes?

The move towards more blended and distance learning is inevitable in current contexts of large groups, flexibility and personalisation. How we will move towards it is not. Once established, distance learning courses may be less easy to change in terms of philosophy and approach than campus based courses and therefore paying attention to the roles and identities of teachers and students, the teaching and learning, as well as the tools to be used, is vital. As Kirkwood and Price (2006:13) argue, change involving new technological tools 'necessitates more than simply replicating or supplementing existing teaching practices: everything governing those practices must be reconsidered and reflected upon.' We must ensure that this includes our campus-based teaching. The assumptions underpinning the teaching we undertake on *all* our courses need to be scrutinised

It could be argued that a key role for Schools and Faculties is the generation and use of a range of approaches to disciplinary and cross-disciplinary analysis of teaching values, beliefs and assumptions and ways of evaluating our teaching approaches in relation to their purposes. This will take time, energy and resources. It would seem to be essential if we are to develop effective learning experiences for our students now and in the future. Discussion on whether and how this could be undertaken would be welcome.

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What is the innovation beyond the 'state of the art' in e-learning?

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Abstract

The motivation for this discussion paper comes from the recent FP7 framework ICT call for technology-enhanced learning applications for the 21st century that go beyond the current "state of the art" in e-learning. In this paper the question of the innovation beyond the "state of the art" in e-learning is considered along with identification and discussion of some of its defining characteristics in the context of higher education. A review and analysis of innovative learning applications and models is presented, with a specific focus on learning environments, and learning interactions. The University of Hertfordshire is used to provide an example of a "state of the art" University regarding the adoption of e-learning applications and methods in day-to-day learning and teaching practice. It is suggested that innovative and "beyond the state of art" e-learning models, tools and applications will be required to support high degrees of personalization and collaboration.

Introduction

The motivation for this discussion paper comes from the recent FP7 framework ICT call (ICT-2009.4.2) for technology-enhanced learning applications that go beyond the current "state of the art" in e-learning. The scope of the paper considers the first part of the call, "Learning in the 21st Century", that focuses on:

> "the design of the future classroom (exploring both technology and teaching practices, for teachers and students, their orchestration for specific, justified age groupings or subjects), supporting individualization, collaborations, creativity and expressiveness in more active, reflective and independent learning activities" (European Commission, 2008).

The remaining objectives of the call such as, links between individual and organizational learning, adaptive and intuitive systems for learning (including games), revolutionary learning appliances (including toys) are not discussed in the paper.
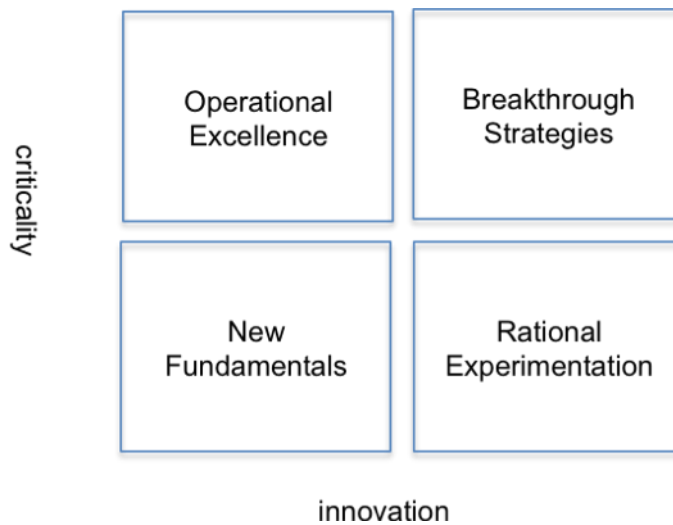
Figure 1. *Internet Value Matrix*

The Internet Value Matrix (Figure 1), a popular e-business evaluation framework developed by CISCO, is used as a basis for organizing e-learning applications into different categories, according to their criticality and degree of innovation:

- New fundamentals - technology-enabled non-critical applications and practises that are low risk and driven by cost-reduction and efficiency objectives
- Operational excellence - needs-driven learning applications and practices that are medium risk, and might involve some degree of re-engineering
- Rational experimentation - highly innovative initiatives, usually involving creation of new learning or business models, new market segments or channels
- Breakthrough strategies - high-risk initiatives, transformative applications and practices.

In this paper the question of innovation beyond the "state of the art" (the "Breakthrough strategies" box in Figure 1) in e-learning is considered, together with an attempt to identify and explore some of its defining characteristics in the context of higher education.

In discussions regarding the "criticality" of e-learning applications the needs of students, employers and other higher education stakeholder, such as governments should be taken into account:

- Students prioritize and value real-time interactions, individuality, creativity, constant stimulation, connecting and sharing. (Bean, 2010),

- Employers are increasingly interested in development of non-cognitive, personal and team-working skills. For example, e-skills UK has worked with the major IT industry employers on defining a set of personal competences and skills that are equally important to employers as technical, business and project skills (ITMB, 2006).
- Government requirements are driven by the needs of digital economies such as, development of lifelong learning networks, increasing participation, cost-efficiency, greater diversity of educational provision etc (Educause, 2010).

Case study in a 'state of the art' university environment

As a result of its pioneering work on implementation of the proprietary VLE entitled StudyNet, the University of Hertfordshire was awarded substantial CETL funding in 2004 for further development of e-learning capabilities and has since became one of the leading UK universities in implementing and evaluating different modalities of e-learning, especially those focusing on blended learning. Blended-learning is a special case of e-learning, that emphasises the importance of face-to-face contact and the underlying pedagogies in any learning design:

> "The key assumptions of blended learning design are: thoughtfully integrating face-to-face and online learning, *fundamentally rethinking* the course design to optimize student engagement" (Garisson and Vaughan, 2008).
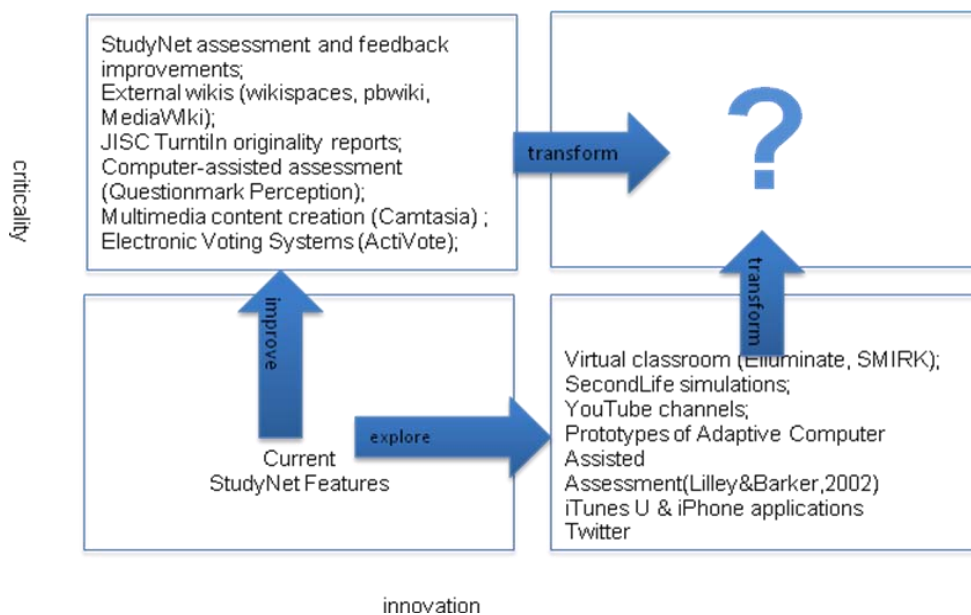

Figure 2. *UH e-learning inventory*

While most teaching staff are using standard StudyNet features in day-to-day teaching practice, an increasing number of teaching staff, estimated at 25%-30% are engaging with more innovative aspects of blended learning. Therefore, the current "inventory" of blended learning at UH includes not only the StudyNet–based applications and related practices, but also, other "informal" ways of learning that extend beyond the institutional walls (Leadbeater, 2009) and which are aiming to either *improve* existing practice ("Operational Excellence" box in Figure 1) or *explore* new blended learning opportunities ("Rational Experimentations" box in Figure 1). However, to move "beyond the state of the art", the University will need to provide students with "transformational" learning experiences, based on highly innovative learning environments. In the next section, we explore what such an environment might be.

Innovative learning models and applications

A simple lexical analysis of the recently funded EU ICT projects in the category of education and e-learning reveals as dominant themes (apart from those related to subject-specific learning applications): collaborative learning (12%) and personalized learning (10%). This finding is further supported by the analysis of students' and employers' needs discussed earlier. In the rest of this section, the specific characteristics of "transformational" innovation in each of these two areas are considered.

Learning Environments: from VLEs to PLEs

While Virtual Learning Environments (VLEs), also known as MLEs (Managed Learning Environments) or LMSs (Learning Management Systems) are a predominant model of technology-enhanced learning environments in higher education today, they tend to be institution-centric and administrative environments, "geared entirely to the management needs of the institution rather than the needs of individual learner".

To address this anomaly, current educational research focuses on the Personal Learning Environments (PLEs that provide learners with more control over their learning experience and in particular, in managing their learning resources, work in progress and learning activities.

Currently, PLEs are supported at a very basic level by standard VLEs such as Moodle, WebCT, or StudyNet, through individual portals and views but with little or no specific capabilities for personalized learning, such as: setting of learning goals, managing process of learning, communication with others in the process of learning, and connecting with other learning resources and systems.

Since the late 1990's, many PLE models and prototypes have emerged (Table 1), but despite some recent success in adoption (e.g. a recent PebblePAD conference attracted 80 delegates from 3 different continents and produced more than 25 case-studies) there still remains a lack of significant uptake by either educational institutions, or work-based learning providers.

While the slow uptake of PLEs can be contributed to the low level of investment compared to that for institutional VLEs, it can be argued that "up-to-date" PLE prototypes and models have failed to realize the initial promise of "learner-centric" and "learned-driven" experience. In particular, apart from standard Web 2.0 features for content creation, aggregation and syndication the PLEs offer little or no capabilities for flexible learning, adaptive testing, coaching, dynamic learning workflows etc.

Table 1. *PLE Examples*

PLE	Features
pebblePAD	Creation of action plans, abilities, achievements, experiences and thoughts.
PLEX	Setting and realisation of learner goals with the creation of learning opportunities and their transformation into learning activities.
Connected Learning Community PLE	Blog-centred environment, linked together and aggregating content using RSS feeds and simple HTML scripts
University of London Computing Centre Personal Learning Plans (PLPs) and e-Portfolios	Customizable Views, Reflective Journals, Networking, C.V. Builder
Manchester PLE	Social networking service with integrated concurrently-editable multi-user media spaces
Dokeos	Adaptive testing, rapid content authoring, course sequencing, coaching and interactions, individual reporting
PLEF	Aggregating, managing, tagging, commenting, and sharing of learning resources
eLearning Companion	A computer-based "conversational agent" designed to give practical support, guidance and focus to the independent learning activities of adults who currently lack the confidence or the opportunity to take part in organised learning(EU 6th Framework Companions Project, documented in Eynon, Davies and Wilks, 2009)

Semantic Web ideas provide a promising framework for realizing some of the PLE potential, especially regarding the dynamic and rapid creation of flexible, adaptive and "semantic-aware" learning environment. The full study of the role of Semantic Web in education is beyond the scope of this paper, but an obvious application is automated generation of e-learning content from the existing web corpus. According to the recent Google Squared Demo at Searchology 2009 one of the hardest computing problems today is "looking at the unstructured web and abstracting values and facts and information in a meaningful way in order to present it to users, building out some of these ... in an automated way." Tools such as *text2onto* (Montoyo *et al.*, 2005) are supporting automatic extraction of the "meaning" (in a form of an "ontology") from an arbitrary text domain. While it can be argued that a mental abstraction of a knowledge domain forms a significant part of the cognitive process, automatically generated knowledge domain models, such as ontologies, can aid the learning journey by providing a "seed" for "active conceptualization" as well as a "trigger" for a "learning conversation" (Cubric & Tripathi, 2009).

Another enabler for the future PLEs is the increasing proliferation of open educational resources (e.g. OER Commons , MIT OpenCourseWare, WikiEducator , Merlot etc) , founded on the principles of Gideon Burton's "Open Scholar", the one who makes their intellectual projects and processes digitally visible, invites and encourages criticism, creates new type of education, uses and contributes to open educational resources (quoted in Anderson, 2009).

The challenge is to extend the PLE with the tools for easy search and navigation of open resources, as they remain hard to find and are not always easy to deploy.

"Personalization" also appears as a dominant theme in recently funded JISC projects on the "Transforming Curriculum Design and Delivery through technology" program, one of the biggest programs under the JISC e-Learning theme. The majority of awarded projects are developing ideas around the "personalized curriculum" topic, such as,

- "Tagging" of curriculum with competences to assist learners in choosing electives (Manchester Metropolitan University)
- Individual curriculum creation where learners will be able to select provision suitable to their needs, construct award and negotiate assessment, with structured support from a personal coach (Leeds Metropolitan University);
- Co-ordinated tools and services which will use learner based timeline scenarios to assist staff to reflect upon and formalise innovative adjustments to the curriculum (University of Ulster).

The innovative PLEs will therefore need to integrate features for creation and management of personalized curricula.

Learning Interactions: from collaborative to net-centric learning

There is plenty of evidence that collaborative learning has been and remains one of the major topics in educational research in the last twenty years. Although there are many definitions of collaborative learning, they all emphasize that collaborative learning takes place within a group and as a result of group interactions, where knowledge is created as it is shared. Some authors, including Panitz (1996) further distinguish between "collaborative" and "cooperative" learning, stating that "collaboration is a philosophy of interaction and personal lifestyle whereas cooperation is a structure of interaction designed to facilitate the accomplishment of an end product or goal." So, for example a group of students discussing a lecture is an example of collaborative learning, but not of cooperative learning. An example of cooperative learning would be a group of students working together to create a web page.

The latest Educause Horizon report (Johnson *et al.*, 2010) in their influential and methodologically sound trend predictions, includes collaborative learning as one of the four major topics in 2010, suggesting that schools "have created a climate in which students, their peers, and their teachers are all working towards the same goals" and that "the emergence of a raft of new (and often free) tools has made collaboration easier than at any other point in history." In addition to the "collaborative-cooperative" divide, Terry Anderson's "taxonomy of many" (Anderson, 2009) distinguishes further between group, network and collectives as basic formations for quality e-learning. While groups are the principal formation for collaborative and cooperative blended learning, networks and collectives are emerging formations for "net-centric" e-learning. All three formations are based on different metaphors, they exhibit different attributes, and are supported by different tools (Table 2). The participatory motivation in the latter two is founded less on the need to "socialize" and more on the ideas of "social capital" and altruism.

Table 2 *Taxonomy of Many (Anderson, 2009)*

	Metaphor	Attributes	Tools	Participatory motivation
Group	virtual class-room, VLE	structure, pacing, leadership, sense of privacy, time-limited, blended	discussion forums, wikis, wiggio	recognition, relevance, socializing
Network	virtual Wenger's 'community of practice', Web 2.0	fluid membership, emergent norms, activity ebbs and flows, rarely f2f, little expectation of reciprocity, transparency	google wave, digg, facebook, wePapers, courseHero, elgg, ning, voicethread	altruism, raising own reputation and social capital
Collectives	emerging net-centric applications	leaving traces on the net, aggregate the information and extract knowledge, wisdom of the crowd idea	Slashdot, Omgili	altruism, raising own reputation and social capital

These ideas are very much in the foundation of Jenkins concept of "participatory culture" (Jenkins *et al.*, 2006), a culture that shifts the focus "from one of individual expression to community involvement" and comes in four different forms:

- Affiliations, formal and informal memberships in online communities that are centered around various forms of media, such as MySpace, Facebook, message boards, game clans etc.
- Expressions, production of new creative forms, such as digital sampling, skinning, video making, fan fiction writing, zines, mash-ups etc
- Collaborative problem-solving, working together in teams, formal and informal, to complete tasks and develop new knowledge (such as through Wikipedia, alternative reality gaming, spoiling, theorem proving in mathematics etc)
- Circulations, contents that are shaping the flow of media (e.g. podcasting, blogging).

Conclusions

In summary, the "breakthrough" and "beyond the state of art" e-learning applications, tools and techniques (Figure 3) will need to support high degree of individualization and collaboration and either encompass or interact with personalized learning environments that will in addition to recording, sequencing, aggregation and syndication of learning resources also:

- Monitor, guide and coach individual learning experience
- Generate learning resources from arbitrary web corpus
- Support the learner in acquiring the digital and media literacy skills through different forms of "participatory culture"
- Incorporate visual as well as textual data analysis (Johnson et al. 2010)
- Provide tools for interacting with networks and collectives of learners
- Motivate, maintain interest, enthusiasms, enable "playful creation" (Ebersbach *et al.*, 2005) and sustain the net presence
- Enable seamless access and creation of open learning resources and
- Be founded on sound learning theories and aligned with the learning and teaching practice.

The future e-learning environments will move away from the institutional VLEs to net-centric, "informal" learning spaces, that will increasingly use the "wisdom of the crowd" and be supported by open content and semantic-aware applications.
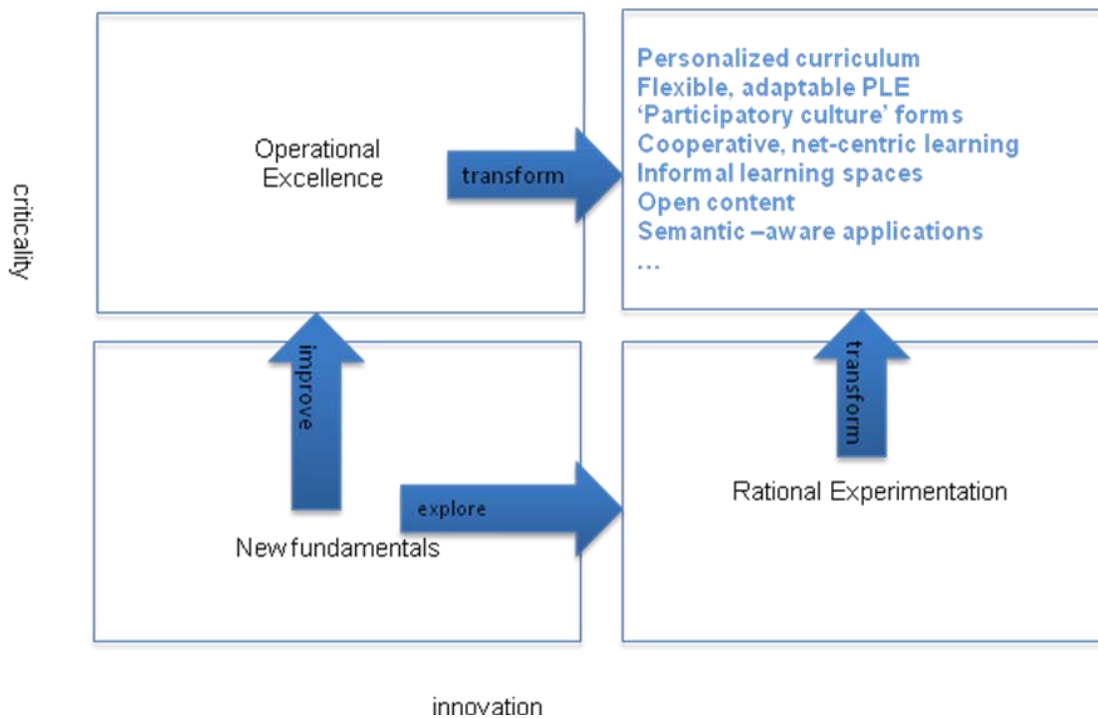
Figure 3. *Breakthrough e-learning strategies*

The challenges facing students, educators and higher education institutions related to the new "breakthrough" e-learning applications are numerous.

In order for personalized learning and teaching to take place, the data about individual learners will need to be collected and mined for trends, predictions and subsequent coaching and guidance. This will inevitably raise questions of privacy, confidentiality and ownership of the data.

The authors of the Educause Horizon report (Johnson, *et al.*, 2010) continue to emphasize the critical challenge of providing training in digital literacy skills and techniques to all disciplines including the teacher education programs. Jenkins *et al.*, (2006) confirm the importance of these skills and furthermore, see them as the main enabler of the new "participatory culture". Amongst those "21st century media skills" are: problem solving through play, discovery and improvisation through adoption of alternative identities, meaningful sampling and remixing of diverse media content, interpretation and construction of simulations, multitasking, distributed cognition, collective intelligence, transmedia navigation, networking and negotiation.

A further challenge is not only to develop the new media literacy skills, but also to maintain interest and enthusiasm and sustain the net presence and net capital of learners who are often "not deeply digitally engaged" (Anderson, 2009). Carefully selected PLE tools could play critical role in this transformation process.

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Student Voice

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What is Teaching?

The current discussions around funding for universities focus on paying for teaching, but what do students perceive 'teaching' to be? 140 students across the University of Hertfordshire were asked to give words or phrases in response to the question 'How do your Higher Education teachers teach you?' The resulting tag cloud shows us both the range of perceptions and which of these predominate.

Interestingly the main response was 'powerpoints' which suggest that students are noticing one tool used in a teaching session rather than identifying the process of teaching. PowerPoint can, of course, be used to model thinking, illustrate ways of connecting ideas, challenge preconceptions and so on. But if students are not aware that different teaching processes are being used can they engage with them effectively? To have a shared understanding of what is happening in a teaching context and a language with which to talk about this would seem essential for learning.

A second concern is that students are identifying as 'teaching' what one would assume would be a relatively minor aspect of their learning experiences. While PowerPoint ia likely to be used in a lecture context, students would be engaging with staff in interactive seminar discussions, problem solving, practical experiments, interactions around texts and a range of other teaching and learning activities. In these contexts teaching is often

undertaken in ways that are different from using PowerPoint with large groups, but does this mean that it is less visible to students? Is teaching in HE being associated in students' minds with lecturing? If this is the case then it has significant implications in relation to what students see themselves as 'paying for' in relation to student fees. However, are students in the future more likely to be involved in fewer 'lecture-type' experiences as current teaching methods focus on experiential approaches, interaction and the use of technology to connect and learn with others? It is important that students need to be able to identify the 'teaching' in these contexts in order to use and value it. Now would seem to be the time to begin a shared discussion about what 'teaching' in higher education involves.

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Student reflection on a university work placement

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Nannayi Dakat

What course are you studying?

Human resources and Marketing, B.A.

Where is your placement?

The University of Hertfordshire, Learning and Teaching Institute.

What do you do in your placement?

I am the Marketing and Consultation Coordinator for the LTI. This involves taking part in projects designed to promote the function of the LTI within the university, helping with the planning and organising of events such as conventions and workshops promoting blended learning for the university as a higher education institution. I am also involved in producing materials that promote best practice for the use of academic staff such as flyers, postcards and this e-journal. Some of my contributions to the ejournal, BLiP, include formatting articles in publisher , editing and uploading media resources (videos, audio files and images).

What made you decide to take a placement year?

I decided to take a placement year because I realized that real world experience gained here would give me a valuable edge over my peers in the jobs market after the completion of my degree.

Do you think you have benefitted from the placement?

Yes indeed. I have learned so many skills and have had the opportunity to hone my existing skills. I am treated as a valuable colleague and have responsibilities that have helped to build my confidence.

Do you have any advice for students considering whether to take a placement year?

I say go for it! A placement year would really help you focus and be better equipped to tackle your final year. Not to mention, obviously, giving you valuable experience and much better chances of getting a good job.

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