



Blended Learning in Practice

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Welcome to the July 2010 edition of our e-journal, *Blended Learning in Practice*. In this edition we present a mix of papers that cover issues as diverse as plagiarism, simulation games and enquiry-based learning. We also present our regular case study section, which this issue focuses on the use of electronic voting systems (EVS). Finally, our student voice sections cover participation in a staff research project and coverage of another project that investigates student views on feedback. As usual, material in the journal is supported by a variety of multimedia resources that can be accessed where indicated.



Phil Porter and Amanda Jefferies

In our first research paper in this issue, Helen Singer discusses authorship and originality, with particular reference to the view from international students. Helen presents results gained from a [Learning and Teaching Institute](#) funded research study entitled 'Fostering pride in International Students' Authorship'. Specifically, the thorny issue of plagiarism is considered and Helen considers a range of strategies using plagiarism detection software and online tutorials to both help students avoid falling prey to accusations of plagiarism, and also to foster pride in the originality of their work.

In our case study section Fang Lou and Jenny Lorimer provide guidance in the use of electronic voting systems. Electronic voting systems allow academics to incorporate regular formative questions into teaching sessions and have been shown to enhance student engagement and interest. Jenny and Fang provide step-by-step guidance on the use of two popular commercially available EVS systems; Promethean™ and Turning Point™.

Sandy Wong then shares her experience of incorporating enquiry-based-learning into modules delivered to trainee midwives. Sandy considers the advantages and potential drawbacks of adopting a teaching and learning technique that places students firmly at the centre of their learning process.

In our final research paper in this issue, Alex Lee discusses the application of technology to the teaching of business students. Specifically, Alex provides a discussion of the merits and perceived drawbacks of incorporating web-based simulation 'games' into modules and concludes that the net educational benefits are positive.

Finally, in our regular 'student voice section', level 3 undergraduate student Kiran Chakravarti talks about his experience of taking part in staff research fieldwork in the Swiss Alps, while Sally Graham and Joy Jarvis present findings from a research project that sought to investigate how students view feedback on their work with the ultimate goal of improving learning, teaching and the curriculum by listening to the student voice.

We hope that you enjoy exploring our July 2010 issue of Blended Learning in Practice. As ever, we warmly welcome your comments and contributions for future editions. If you are interested in contributing then please contact us via Dr Phil Porter: p.r.porter@herts.ac.uk

Phil Porter

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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'.

Phil and a group of his students have just returned from a two-week trip to Switzerland. Phil runs an annual project in the Swiss Alps allowing University of Hertfordshire students to collect field research data for dissertation and project work. The ultimate aim of his work in Switzerland is to further the integration of teaching and research.

Amanda Jefferies

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Amanda Jefferies is a Reader in Technology Enhanced Learning and a Principal Lecturer in the School of Computer Science at the University of Hertfordshire. She is seconded to the [Blended Learning Unit](#) (CETL), where she is Evaluation Coordinator and leads on Scholarship, Research and Evaluation. Her own research interests relate to students' experiences of using technology to support learning. Beyond the University she is a member of the JISC Learning and Teaching Experts group and supports the E-Learning Experiences Special Interest Group ELE-SIG.



Helen Singer

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Helen Singer is the Lead Knowledge and Business Intelligence Consultant (KBIC) within Information Hertfordshire; she and the KBIC team which she manages work in partnership with all the Strategic Business Units (SBUs) across the University. Helen started her career at the British Council, and after an MA in Librarianship spent 2 years in a City Law Library before joining the University as an Information Consultant in 2000. Helen has a PG Diploma in Learning and Teaching, is a Fellow of the Higher Education Academy and is particularly interested in support for international students, information literacy and blended learning

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Fang Lou is a senior lecturer in Physiology in the School of Life Science, University of Hertfordshire. She obtained her first degree in China and PhD in Sweden. Fang has worked in muscle research at Imperial College and joined the University of Hertfordshire in 2002. Her research interests include muscle physiology and pathology. Fang is also a LTI teacher working in the area of assessment and curriculum design. She employs a variety of technology, including electronic voting systems (EVS) to enhance the student learning experience.



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Jenny Lorimer is a Senior Lecturer in the School of Health & Emergency Professions. Having worked as a Superintendent Radiographer running a CT scanning service, Jenny moved into full-time teaching at the University of Hertfordshire in 2001. Her teaching interests are centred on anatomy, pathology and the appearance of pathologies on diagnostic images. Jenny is also a LTI teacher with her main focus being contributing to the Continuing Professional Academic Development in Learning and Teaching in Higher Education (CPAD) Programme. Jenny has been actively involved in research into Learning and Teaching for a number of years and has been using electronic voting systems since 2005.

Alex Lee

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Alex Lee is a Senior Lecturer in the Marketing & Enterprise Department of the Business School at the University of Hertfordshire (UH). Prior to joining UH, Alex's expertise spans over 10 years in the fields of Advertising, Branding, and Marketing; and 5 years in Academia in Malaysia. Alex believes in keeping up to date with the changes in technologies and life-long learning.

Sandy Wong

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Sandy Wong joined the School of Nursing, Midwifery and Social Work at the University of Hertfordshire (UH) as a midwifery lecturer in June 2009. Prior to this, she has been a clinical mentor for many years, mainly as a community midwife. Her previous role as a community clinical manager also saw her involvement with Child Protection at the strategic level. Sandy has also undertaken a qualitative research project on perinatal mental health for her MSc degree. She sees herself as an expert in normality in pregnancy and childbirth, with special interests in diversity and public health. Since joining UH, Sandy has completed her CPAD (1-4 modules) programme and is an associate of the Higher Education Academy.

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 exploring the issue of feedback and assessment.

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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.

International Students' Authorship

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Abstract

In order to improve information literacy, reduce plagiarism and develop pride in authorship of written work amongst international students a research study was undertaken at the University of Hertfordshire within the Business School, trialling a holistic approach to dealing with these issues. The key objectives of the project were to raise awareness of the issue of plagiarism amongst students, develop understanding of academic integrity and authorship, encourage the use of 'quality' information and correct referencing, improve academic writing skills and inform educational policy within the Business School and the wider University.

The project was carried out with thirty-four international students studying a Business Strategy module in the Business School. The project was directly linked to a Business Strategy assignment through a sequence of re-usable blended learning workshops, with input from an Academic Skills tutor and the use of i-Spy, the university's online information skills tutorials. In addition, students used the plagiarism detection software 'Turnitin' as an educational tool for formative feedback to develop their authorship skills.

The success of the project was evaluated against the student success in course assessments, together with feedback obtained from students via reflective logs, a focus group and a questionnaire. Feedback was also obtained from tutors and external examiner via interviews. The workshops were found to have improved the skills of the sample cohort. Students used a wider range of sources, referenced them correctly and, according to the module leader, did not plagiarise. It is recommended that benefits may be derived from adopting a holistic approach towards dealing with the issues of authorship and plagiarism.

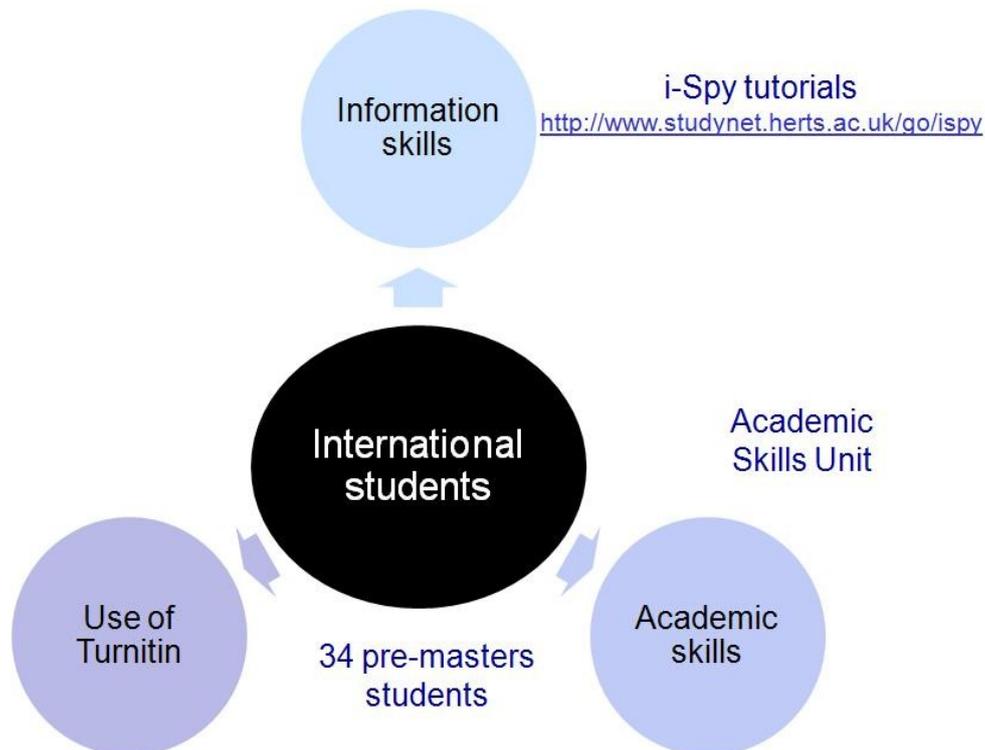
Background

This paper presents the findings of a University of Hertfordshire Learning and Teaching Institute funded project 'Fostering Pride in International Students' Authorship.' carried out in collaboration with Karen Robins, now the Business School's Director of Learning and Teaching and Mary McCauley from the Business School's Academic Skills Unit. The project ran from October 2008-January 2009. The aims of the project were to develop an understanding of authorship and originality in a cohort of principally Chinese international Business School students studying for the Graduate Certificate in Business at the University of Hertfordshire, through a series of ten workshops. Data was collected using qualitative and quantitative methods to evaluate the success of the workshops.

In order for students to understand authorship and originality and take pride in authorship of their own written work, workshops were devised to raise their understanding and awareness of plagiarism, and empower them by giving them tools to create an original piece of academic writing. The workshops gave the students the opportunity of using the

originality checking software Turnitin for formative feedback, along with underpinning information literacy and academic skills input. The approach adopted was intentionally a holistic one (see Figure 1), based on research already undertaken in this area.

Figure 1. A holistic approach



Plagiarism

Plagiarism has been defined by Dahl (2007 p.174) as 'anything where a student incorporates a substantial, unacknowledged amount of materials derived from the work (published or unpublished) of another student.'

There are of course many reasons why plagiarism is a problem. Park (2003) cites the reasons for tackling plagiarism as fairness, academic reputation and integrity, promotion of good study skills and independent learning, and fostering a sense of responsibility amongst students.

As far back as 2002, it was noted by Johnson and Rader (2002) that students are increasingly using the internet for their information needs. Given the wealth of easily available information, it is very easy to 'borrow' text without acknowledging it. The extent of the problem is not readily quantifiable but there is rising concern (Park 2003). Park (2003) also argues that the causes of plagiarism are many and complex, ranging from a genuine lack of understanding to deliberate cheating.

Potential causes of plagiarism amongst international students

Although studies such as that by Varga-Atkins and Ashcroft (2004) found little difference between the information skills of home and international students, there are concerns that there are higher incidences of plagiarism amongst international students. There could be many reasons for this, including culture and language.

The cultural issues surrounding plagiarism have been explored by Lake (2008), who suggests that in China to paraphrase could signal disrespect to the author and Holmes (2004) who suggests that in China there is greater allegiance to established authorities; however Gu and Brooks (2008) argue strongly against generalisation whilst Liu (2005) argues that plagiarism is not acceptable in China. Zhang (2006) and Song (2004) discuss the challenges faced by international business students at the University of Illinois in using virtual reference resources.

Gu and Brooks (2008, p338) suggest that this goes deeper: 'learning to write in an unfamiliar academic discourse requires, at the deepest level, a *conceptual* understanding of knowledge construction and conventions in the dominant academic community, rather than practice of mechanical aspects of citing and referencing'.

Another cultural issue is the perception that international students have difficulty with critical thinking. Gu and Brooks (2008) argue that independent thinking is part of the Chinese tradition but that there could be a problem for Chinese students in understanding the concept of building on a body of knowledge to advance original thinking. Holmes (2004) discusses the problems of students having to change their learning styles.

Regarding language, Pecorari (2008) considers some of the linguistic issues that can put international students at a disadvantage. To cope with poorer language skills, international students may well employ the habit of patchwriting, where chunks of text are stitched together, defined by Howard in 1993 and seen by Pecorari (2003) as an essential phase before students' own voices can emerge.

Potential remedies

To maintain academic integrity, despite all these considerations there remains a need to tackle plagiarism and JISC (the Government funded Joint Information Systems Committee) commissioned the Electronic Plagiarism Detection Project which reported in 2001. According to JISC (2000) 'Electronic detection has its place in institutions but the real solutions lie in appropriate assessment mechanisms, supportive institutional culture, clear definitions of plagiarism and policies for dealing with it and adequate training for staff and students'. In 2002 JISC set up Plagiarism Advice.org which has a resource bank of good practice across institutions.

One electronic plagiarism detection tool is Turnitin, which was developed in 1998 and won a contract with JISC to serve HE institutions in Britain (Park 2004). *Turnitin* produces

originality reports so that it is easy to see how much text is the student's own work.

In recent years, the emphasis has shifted from the use of Turnitin for detection to that of an educational tool, so that the term 'text matching' is preferred to 'plagiarism detection'. Introna and Hayes (2008) call for a move away from a punitive legalistic approach to plagiarism that equates copying to plagiarism and move to a progressive and formative approach.

The importance of educating students in using Turnitin is underlined by Davis (2007) who recommends tutor guidance in the use of Turnitin and also stresses that this is not a single solution but should be used as part of an integrated approach.

Recently there have been more calls for Turnitin to be used for formative feedback. Introna and Hayes (2008) argue that inappropriate use of Turnitin is unfair, but that it should be used formatively. Brick (n.d.) at Coventry University describes using Turnitin for formative feedback. Ledwith and Risquez (2008) found a decrease in plagiarism when anti-plagiarism software was used with peer reviewed assignments. Davis (2007) worked with students on a Pre-Masters Diploma at Oxford Brookes University and recommended using Turnitin with first drafts prior to assessment. This approach was reinforced more recently by Davis and Carroll (2009).

A holistic approach

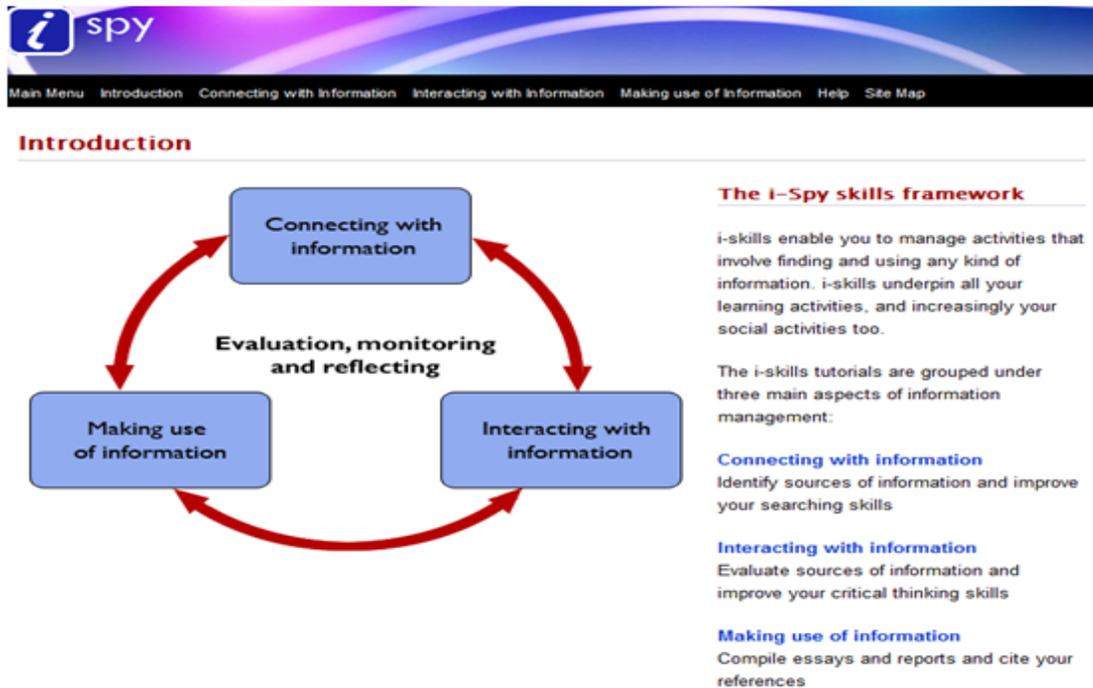
Instead of a punitive approach, seen by Leask (2006) as discriminatory, a holistic approach has been advocated by Gu and Brooks (2008), and Macdonald and Carroll (2006). Education along with effective detection is seen as the best approach by Angelova (1999) and Dahl (2007). Barrett and Malcolm (2006) from the University of Hertfordshire discuss the importance of embedding plagiarism education in the assessment process. The project aimed to supplement the use of Turnitin for formative feedback with two other areas, information literacy and academic writing skills.

The importance of assisting students with information literacy has been identified by Rowell (2009) while Barry (2006) discusses the importance of critical thinking and evaluating sources and the need for instruction and practice in referencing. For this project, it was felt that if students could be encouraged to use good quality sources of information and were equipped with the skills to search good sources and evaluate them, the risk of plagiarising websites could be reduced.

i-Spy (www.studynet.herts.ac.uk/go/ispy) is the University's information skills framework, and is populated with online tutorials covering all aspects of working with information. The i-Spy information skills framework, described by Bilson et al (2007) and shown at Figure 2, was initially introduced to the University of Hertfordshire in 2007, following consultation with staff and students and research by external consultants into the way people work with information. Whilst most frameworks until this point were linear, the i-Spy model is iterative, and populated with online tutorials in 'bite-sized' chunks, reflecting the

fact that students do not work in a linear, sequential fashion. In this sense they can be described as reusable learning objects (Mardis and Ury, 2008).

Figure 2. The i-Spy framework



Academic writing skills are also vital and Elander et al (2010) have since shown that paraphrasing practice brings positive results. The [Academic Skills Unit](#) (ASU) runs as a discrete unique unit in the University of Hertfordshire Business School (UHBS). ASU's role/mission is:

- To encourage students to complete their studies at UHBS to their best ability by providing a range of supportive resources, and empower them to develop their full potential as independent learners.
- To liaise with UHBS staff to improve teaching and learning

ASU, whose website is shown in Figure 3, runs skills workshops almost daily to support all students, including academic essay/report and dissertation writing, Harvard referencing, editing and proof reading, team work, presentation skills, reflective writing, creativity, critical evaluation, statistics and numeracy, exam revision tips and various self management workshops such as managing stress and time management.

This project was a vehicle for i-Spy tutorials, academic skills content and the use of Turnitin to be brought together to support students conducting a specific piece of work, so that the students could see the immediate benefits rather than viewing the workshops in isolation.

Figure 3. ASU website

Academic Skills



[Edit folder introduction]

WELCOME to the Academic Skills web site

<p> Workshops Timetables</p>	We are in room M012 on the ground floor, de Havilland campus. Tel: 01707 281248
<p> Academic Guides by topic</p>	Mike Courtney m.j.courtney@herts.ac.uk 😊 academic skills appointments and e-support
<p> Techtips</p>	Hazel Messenger h.messenger@herts.ac.uk 😊 Tina Bryant t.bryant@herts.ac.uk 😊
<p> Managing Yourself</p>	Tracy Allardice t.allardice@herts.ac.uk 😊 coping with your studies Gemini Pankhania g.pankhania2@herts.ac.uk 😊 numerical skills support
<p> Technology to Learn</p>	Come to a workshop to help with your Business School studies - these run throughout term time. Our extensive range of guides (see left) will help you perform better.
<p> Report Writing</p>	You can make an individual appointment after attending workshops and reading our guides, to discuss a specific problem or if you have been referred to us by your lecturer.
<p> Essay Writing</p>	We can assist with planning, researching and essay writing, report writing, case studies, referencing, dissertations, etc. We can help with study problems, time management, exam revision, etc. Your lecturer is the only one who can comment on your actual assignment and the instructions for completing it.
<p> Presentations</p>	

Preparing for the workshops

The Graduate Certificate in Business Programme is a 15 week pre-Masters Programme where international students study four business modules with intensive language and study skills support. Successful completion of the Programme takes students on to a Masters course. The Programme is divided into two two-module blocks; the Programme which starts in September has a second block beginning in November.

It was decided to work with students on a core module, Business Strategy, taken by the whole cohort of thirty-four students in the second block. The learning outcomes of the Business Strategy module focussed on research and critical analysis which fitted well with the aims of the project.

The assessed piece of work for this module was a group assignment on Google's business strategy. The workshops were designed and timed to support this piece of work. The students on the Programme (and this module) were predominantly from China with a smaller number from India and Nigeria, and one from Hong Kong. For the group assignment they were mixed into multi-national groups.

Although no credits were attached to the workshops, it was agreed that students would be told that attendance was compulsory and that non-attendance could lead to them dropping a grade. The workshops took place over three weeks in November and December 2008, as the students were preparing their assignments. The workshops were divided into five blocks of two hours, held over three weeks in November and December, 2008. We divided these into five sections as follows

Thursday 13 th November	SEARCH
Monday 17 th November	READ AND CONSIDER
Monday 24 th November	WRITE AND REFERENCE
Thursday 27 th November	PRIDE IN AUTHORSHIP
Monday 1 st December	REFINE WORK

Running the workshops

Workshop attendance was compulsory and monitored. Students were given individual invitations to attend the workshops, signed by the Acting Programme Tutor to sanction the workshops and demonstrate the importance of attending.

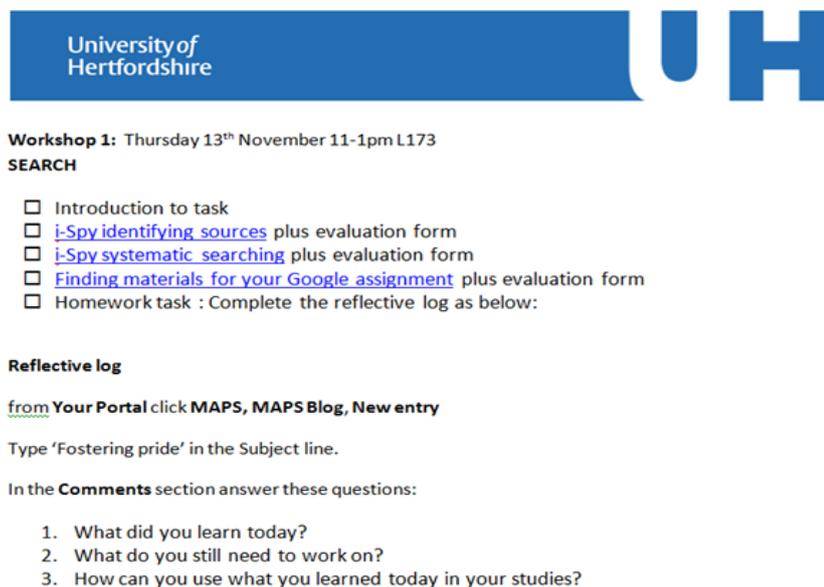
Attendance was generally good, even if a small number of students arrived quite late in the session. All thirty-four students registered on the module attended the workshops.

At each workshop students were given handouts to accompany the online work or presentations. A 'team teaching' approach was used, and this was found to be useful for transferring knowledge between the team members. All the materials were also available electronically in weekly folders on the students' module page on StudyNet. At the end of each workshop students were asked to complete a reflective blog which was saved in their Personal Development Portfolio area on StudyNet. This lent cohesion to the workshops and aimed to make the students feel valued.

5. Content of the workshops

The first workshop, *Search*, shown in Figure 4, covered identifying sources of quality information. Students were introduced to the i-Spy tutorials and asked to work through two: *Identifying Sources* and *Systematic Searching*. *Identifying Sources* illustrates different types of information, books, journals, databases and websites. *Systematic Searching* gives tips on effective searching using keywords. The students were then directed to an online tutorial on the module site which guided them to quality sources of information to help them with the Google assignment. This was accompanied by a checklist listing good sources of information for the assignment.

Figure 4. Content of first workshop



University of Hertfordshire

Workshop 1: Thursday 13th November 11-1pm L173

SEARCH

- Introduction to task
- [i-Spy identifying sources](#) plus evaluation form
- [i-Spy systematic searching](#) plus evaluation form
- [Finding materials for your Google assignment](#) plus evaluation form
- Homework task : Complete the reflective log as below:

Reflective log

from [Your Portal](#) click [MAPS](#), [MAPS Blog](#), [New entry](#)

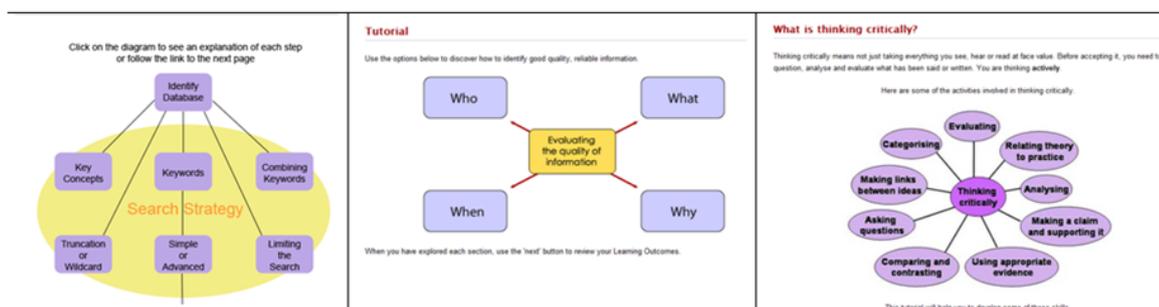
Type 'Fostering pride' in the Subject line.

In the **Comments** section answer these questions:

1. What did you learn today?
2. What do you still need to work on?
3. How can you use what you learned today in your studies?

The second workshop, Read and Consider, covered evaluating sources. Students were asked to work through the i-Spy online tutorial *Evaluating and Verifying* which asks them to look at information considering Who, What, When and Why. This was followed by the i-Spy *Thinking Critically* tutorial which looks at analysing and questioning viewpoints. This was followed by a presentation on Academic Reading and students were given an 'ASU Guide to Academic Reading' which includes the SQR3 technique and a handout on planning for written assignments. Figure 5 shows some screenshots from the i-Spy tutorials used by the students.

Figure 5. i-Spy tutorials



Click on the diagram to see an explanation of each step or follow the link to the next page

Search Strategy

- Identify Database
- Key Concepts
- Keywords
- Combining Keywords
- Truncation or Wildcard
- Simple or Advanced
- Limiting the Search

Tutorial

Use the options below to discover how to identify good quality, reliable information.

- Who
- What
- When
- Why

Evaluating the quality of information

When you have explored each section, use the 'next' button to review your Learning Outcomes.

What is thinking critically?

Thinking critically means not just taking everything you see, hear or read at face value. Before accepting it, you need to question, analyse and evaluate what has been said or written. You are thinking actively.

Here are some of the activities involved in thinking critically.

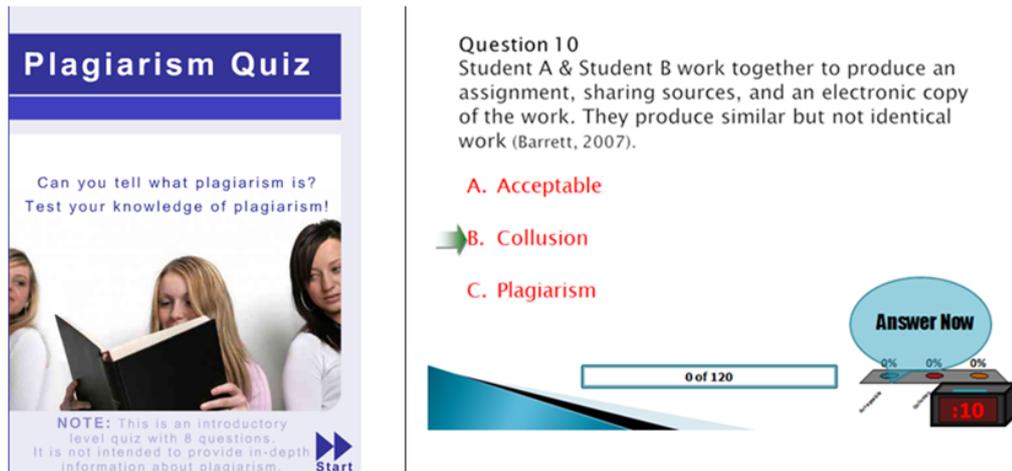
- Evaluating
- Relating theory to practice
- Analysing
- Making a claim and supporting it
- Using appropriate evidence
- Comparing and contrasting
- Asking questions
- Making links between ideas
- Categorising

Thinking critically

This tutorial will help you to develop some of these skills.

The third workshop covered *Write and Reference*. The first task was to show the students the Avoiding Plagiarism website, to which the University had contributed. The students were then introduced to the i-Spy *Citing and Referencing* tutorial, which links to an interactive quiz where students are asked to decide what constitutes plagiarism in a number of scenarios. Students looked at an online 'Harvard Referencing Guide' on the Business Information pages of StudyNet and were asked to bring the results of a referencing quiz to the next workshop. This was followed by a presentation introducing them to Turnitin, and a very successful interactive session using the Electronic Voting System, where students

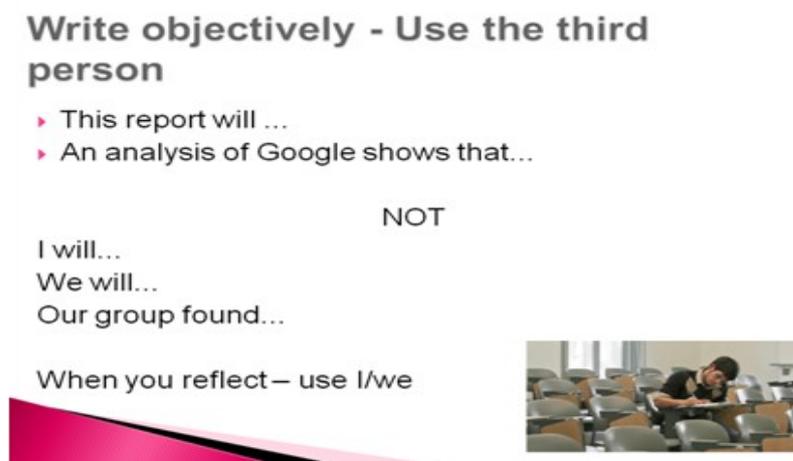
Figure 6. Referencing quiz from Monash University used in i-Spy tutorial Citing and Refencing and quiz on Collusion and Plagiarism used with electronic voting system



At the fourth workshop Pride in Authorship, the results of the Harvard Quiz were examined as a group. Students then looked at ASU's Report Writing and Academic Writing Style guide and the i-Spy Essay and Report Writing tutorial. Figure 7 shows some of ASU's presentation on Academic Writing.

The groups then submitted their draft assignment to Turnitin, with the target for the similarity index 10% and individual matches 1% or less. This was salutary, as some group reports initially showed these as much higher.

Figure 7. Academic Writing presentation



The reason for setting the similarity index target at 10% was to encourage students to paraphrase and use their own words. This was to avoid their work being highly derivative which would indicate an excessive use of sources even if they had been referenced correctly. For homework, students were asked to use the Turnitin feedback to revise their draft reports. Figure 8 shows a Turnitin originality report, as explained to the students.

Figure 8. A Turnitin originality report

The screenshot displays a Turnitin Originality Report for a document titled "capital structure". The report shows a similarity score of 10%, which is circled in red. The document text includes an introduction and a section on "optimal capital structure". A list of six matches is shown on the right, with the highest match being 1% from a student paper submitted to the University of Nottingham.

Match Number	Match Description
1	1% match (student papers from 16/10/07) Submitted to University of Nottingham
2	1% match (student papers from 20/02/08) Submitted to University of Leicester
3	1% match (student papers from 11/12/07) Submitted to University of Edinburgh
4	1% match (student papers from 25/11/07) Submitted to University of Hull
5	< 1% match (student papers from 21/10/07) Submitted to University of Luton
6	< 1% match (student papers from 31/03/08) Submitted to University of Leicester

The final workshop, *Refine Work* gave the students the opportunity of working in their groups to refine their group assignments and resubmit them to Turnitin. The students were advised on editing and proof reading and given an ASU Guide on drafting, editing and proof reading. One group was happy to have their Turnitin results projected onto the screen, as they had achieved a very pleasing low Turnitin score, meaning that they had used their own words in the assignment and were able to paraphrase effectively. Students were asked to email an overall reflective log, using the reflections from each of the individual workshops.

6. Impact Assessment

The impact of the project was assessed in a number of ways. Feedback was obtained from students using the students' own reflective blogs, an online evaluation form and a focus group. Feedback from staff was obtained through interviews with the English tutor supporting the module, the module leader and the external examiner; the latter two also provided written reports.

6.1 Feedback from students

Fourteen reflective blogs were received, which provided a rich source of evaluative data. The prompt questions asked after each workshop were:

- What did you learn today?
- What do you still need to work on?
- How can you use what you learned today in your studies?

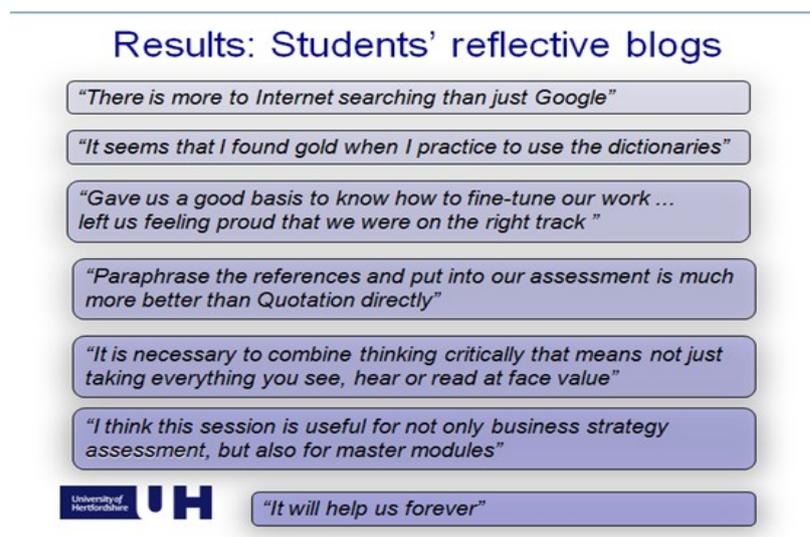
A final evaluative blog was also requested, with the questions:

- What did you learn from the workshops?
- What do you still need to work on?
- How can you use what you learned in the workshops in your studies?

The standard of English in the reflective blogs was not very good in the case of the Chinese students, and there is one case where two students have used identical incorrect phrases. However, as a way of reinforcing what was covered in the workshops they are useful. Although some of the blogs suggested the need for practice and the difficulties students face regarding language, the reflections were very positive about the usefulness of the workshops and the students seemed to have really understood their purpose. Some examples can be seen at Figure 9.

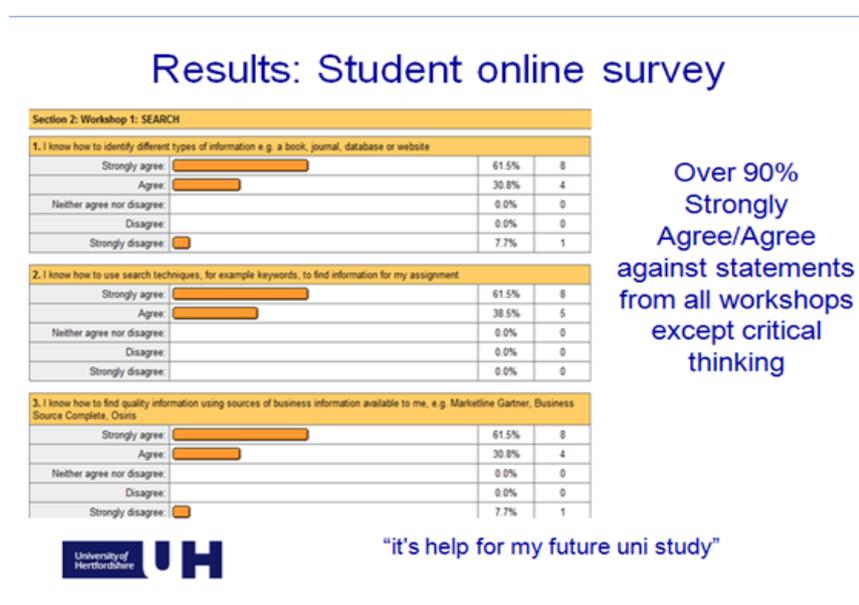
Using the Bristol University online survey, a questionnaire was set up for students to provide feedback on the workshops in December, 2008. The questionnaire consisted of nineteen multiple choice questions to gauge how far students had understood the content of the workshops, with two open questions on perceptions of i-Spy and the workshops generally.

Figure 9. Examples of comments from students' reflective blogs



Students were emailed with a link to the questionnaire. However, the response rate was disappointing with only thirteen out of thirty-four students completing the survey, despite a £50 Amazon prize draw incentive. This may be attributed to the students being busy completing assignments and having a Christmas/New Year holiday. However, the results were generally very positive as can be seen in Figure 10. The fact that only 78% of respondents agreed/strongly agreed that they knew how to think critically following the workshops could be attributed to the fact that this is the most difficult type of work, or that the workshops had not addressed this area fully.

Figure 10. Results of questionnaire to students



This was followed by a one hour focus group in January, after Chinese New Year and before the students embarked on their Masters Programmes. Six students of different nationalities were chosen from those who agreed to give their time. Students were paid £25 Amazon vouchers to participate. However, only three students attended the focus group, all from China, so this was not a very representative sample. It was felt that the timing of the focus group clashed with their holiday. However, it was necessary to collect data at this time, before the students moved onto Masters Programmes, when it would be difficult to get them together again and it was also felt that it was good timing as recollection of the workshops were fresh in their minds.

Figure 11. Results from focus group.

Results: Student focus group

The students felt that:

- It was good that workshops **focussed on assignment**
- They would have benefitted from having the workshops **earlier** in their Programme
- They would have liked to see **more examples** of what constitutes good work
- They would have liked more use of **Turnitin**
- They recognised the **differences between studying** in China and the UK
- 'The UK is **more creative** and deeper'
- Plagiarism** is not an issue in China but is not tolerated here

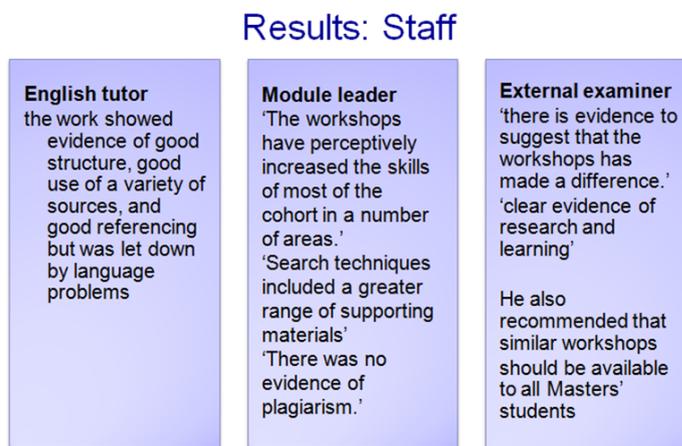
The feedback (Figure 11) shows that students thought they would have benefitted from having the workshops earlier in their Programme. They would also have liked to see more examples of what constitutes good work. The students recognised the differences between studying in China and the UK, with the emphasis on writing essays, and interestingly noted that plagiarism is not an issue in China although they knew that it is not tolerated here.

6.2 Feedback from the teaching staff and the external examiner

Staff interviews were conducted in December and January. The English tutor who provided four hours of English for every two hours of business content was quite pleased with the outcome of the students' group assignments and confirmed that they showed evidence of good structure, good use of a variety of sources, and good referencing but were let down by language problems.

The module leader was more positive and stated that although there were language issues, and that this was a small sample, he felt confident that the workshops had helped improve the students' assignments.

The external examiner was very positive about the impact of the workshops. Following the exam board, he recommended that similar workshops should be available to all Masters' students. Extracts from staff feedback are shown in Figure 12.

Figure 12: Extracts from staff feedback

7. Reflections on the project

The project was quite labour intensive in terms of time spent planning and running the workshops. Great effort was made to ensure that the students valued the workshops through regular reinforcement and encouragement.

It is possible that having an online tutorial guiding students to relevant sources of information for the assignment would result in the good use of a wide range of sources, rather than the i-Spy tutorials on '*Identifying Sources*' and '*Systematic Searching*', however this might not be sustainable and could impact on students' ability to develop independence for future assignments.

One of the anticipated risks of the project was regarding how the students would use Turnitin. One group did attempt to use the software to submit work other than the Business Strategy assignment. However, it could be perceived that they saw the value of using the tool for formative feedback and wanted to use the opportunity to obtain feedback on other assignments they were undertaking.

One possible outcome of using Turnitin might mean that the students' English is worse because they have to paraphrase more. But it can be argued that having to paraphrase is good practice and will help further in the long term by giving the students the opportunity to use their own words.

8. Summary of results

The qualitative data from the questionnaire, reflective blogs and focus groups showed that the workshops were very well received by the students. The questionnaire results were extremely positive, with nearly all scores showing that over 90% agreed or strongly agreed with statements confirming that the students had acquired skills in the areas covered by the project.

Students and the external examiner felt that the workshops were very useful but should have been held earlier in the semester. They felt that all Masters students would benefit from similar input, possibly in the Research Methods module. The external examiner reported evidence of wider reading in the assignments. The students would have liked to see examples of good pieces of work and perhaps this could be introduced in the future.

Regarding the use of Turnitin, this was successful and the students were keen to use it further. The module leader reported no evidence of plagiarism in the students' work and noticed that they had used fewer quotations, indicating that they had paraphrased more.

The area that scored least highly in the questionnaire was that of critical thinking, which is known to be difficult for all students. However, the module leader thought that that this was slightly better than with previous cohorts. The English tutor pointed out that he would have liked the students to challenge him more, but this is probably a cultural issue; and more work should be done in this area.

The evidence has shown that the work undertaken by the students has helped them understand the importance of originality and authorship both in the context of the particular module, and for their future studies.

9. Conclusion and Recommendations

The workshops confirmed the findings of previous research, by demonstrating that intensive underpinning work looking at finding and using good quality information, academic reading and writing, critical thinking and the formative use of Turnitin can all help the standard and quality of international students' work and help them take pride in their own authorship.

As a result of this pilot project the Business School are opening up the Turnitin draft facility for all students and this is embedded in the new core level 1 skills module. It is hoped that this will help students towards the ultimate aim, identified by Gu and Brooks (2008, p.350) of mastering 'a different lens through which to view authorship and the ownership of knowledge.'

Recommendations

- Ensure timeliness by holding workshops early in the Programme.
- Continue to embed skills materials into assessed work.
- Continue to make engagement with the materials mandatory.
- Undertake further work on critical thinking and challenging the lecturer.
- Encourage other academic staff to use *Turnitin* for formative feedback.
- Run the workshops by blended learning for increased flexibility and in order to 'scale up' to benefit more cohorts. This can be achieved through online exercises, as with the i-Spy tutorials and quizzes. This would fit with the University's key aspiration of 25% distance learning by 2015.
- Since the workshops finished a new i-Spy tutorial, Academic Reading, has been launched. This could be used to complement the ASU materials.⁸ Consider using the 'Recognising bias' i-Spy tutorial for more advanced work on critical thinking.
- If the materials are to be rolled out to all Masters Programmes, they could be linked to the Research Methods module with a small percentage of marks allocated for successful completion.

10. Looking forward

Since this pilot, subject toolkits are available in the Learning Resources area of StudyNet for each subject. These toolkits provide links to quality resources, i-Spy tutorials, and Referencing guides.

In addition, more work has since been undertaken in making Turnitin more easily available for students and staff to use formatively. Information Hertfordshire Knowledge Consultants are working with the Academic Quality Office and the Director of Learning and Teaching in the Business School to provide guidance.

Acknowledgements

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How to use TurningPoint

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1. Introduction

The place of formative assessment within learning has long been established (Draper, 2009, Nicol and Mcfarlane-Dick, 2006) and electronic voting systems (EVS) are an easy to use technology that allows lecturers to incorporate regular formative questioning into their teaching sessions. One of the key benefits of using EVS are that large class sizes are not a barrier to their use (Campbell & Mayer). Experience within the Faculty of Health & Human Sciences has demonstrated that they can be used to create a level of stimulation and interactivity that increases the student's learning even in large groups.

There are several different systems available, and the simplest of them require almost no more knowledge than creating a PowerPoint™ presentation. Typically an EVS comprises four elements. A tool for presenting lecture content and questions (e.g. a computer, PowerPoint™ and a digital projector) is required. Handsets (or clickers) which resemble TV remote control units, enable students to respond to a lecturer's questions. A small, simple receiver collects and records students' individual responses and software collates and presents the responses (Educause, 2005). Both students and the lecturer receive immediate feedback on the student's understanding of the material being taught. This allows the students to recognise areas for further study and gives the lecturer the opportunity to immediately clarify areas of misunderstanding or confusion (Lorimer & Hilliard, 2009).

TurningPoint is one type of electronic voting system (EVS). You need to install the software to write voting questions (there is no licence limit for the installation). One type of handset (respond card) has a multiline screen to display your answer, menu, presentation mode, channel setup, etc.



Each handset has a unique ID on the back, which can be identified by the receiver during voting. The receiver has a USB connection to the computer.

For screen capture video click the link here.

2. Write an interactive slide in TurningPoint

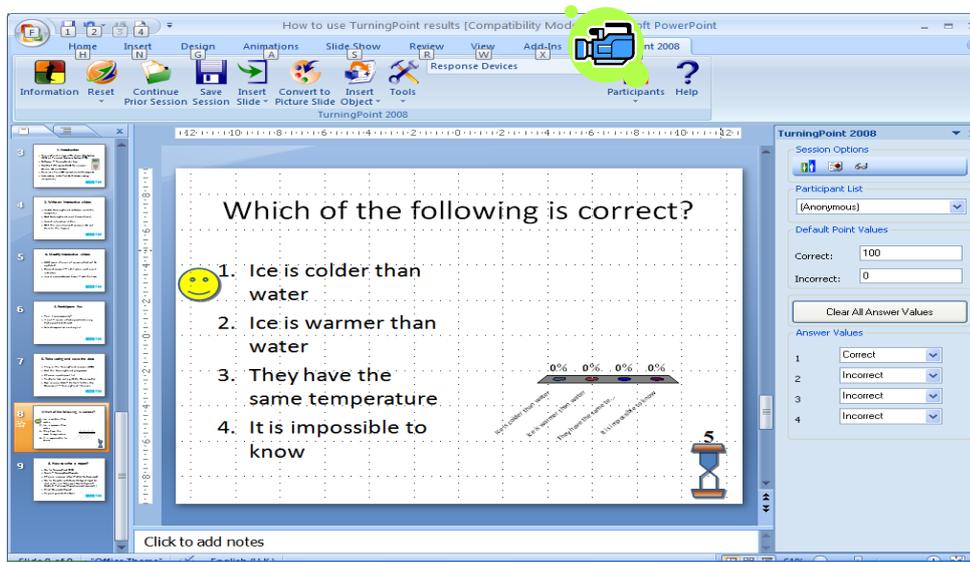
You can open existing PowerPoint slides in TurningPoint, but only Interactive Slides can take voting. You can insert such slides in the 'TurningPoint 2008' by clicking 'Insert Slide'. There are many types of slides. You can start with an easy one, for example, 'generic' with 3 answers (see the screen shot).



The inserted interactive slide has three areas: question, answer and chart. Question and answer areas can be edited, but none of them can be deleted.

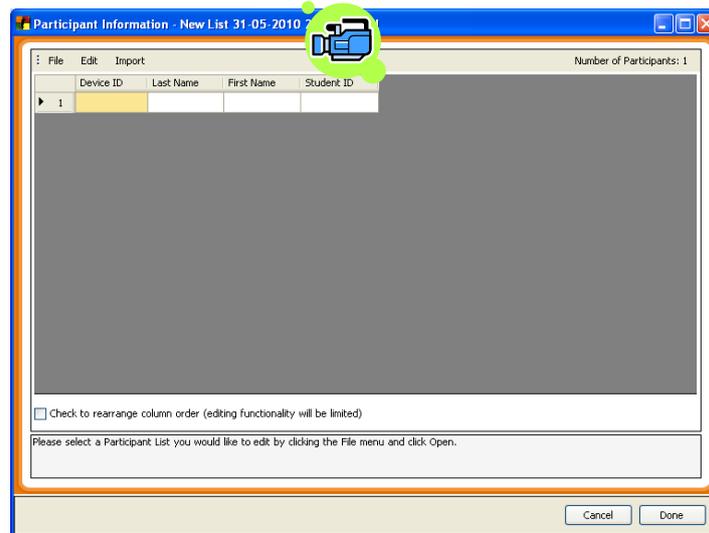
3. Modify the interactive slide

More choices of answer can be added, and the chart will be updated automatically. A correct answer indicator and countdown timer can also be added.



4. Participant list

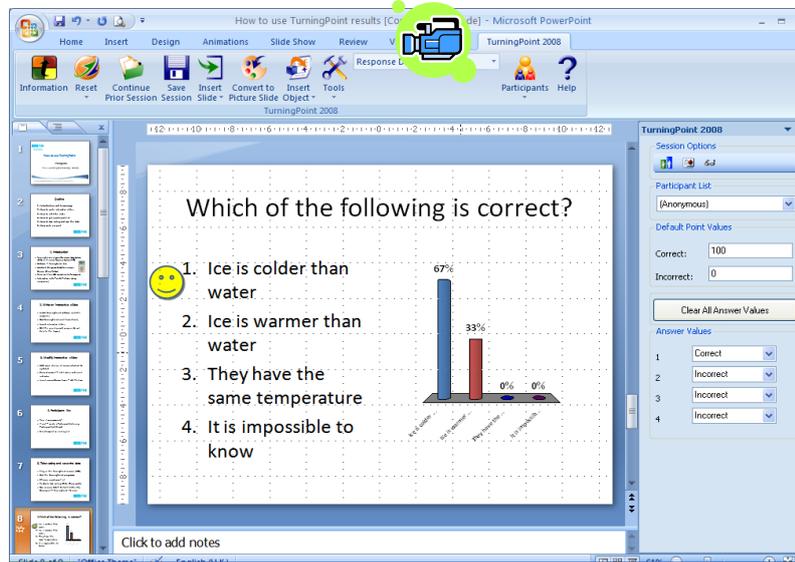
You can run the voting anonymously (as default), or you need to create/import a participant list. The basic fields in a participant list include Device ID (unique, on the back of the handset), Last Name, First Name and Student ID. More fields can be added, and also groups can be defined.



5. Taking votes and saving the data

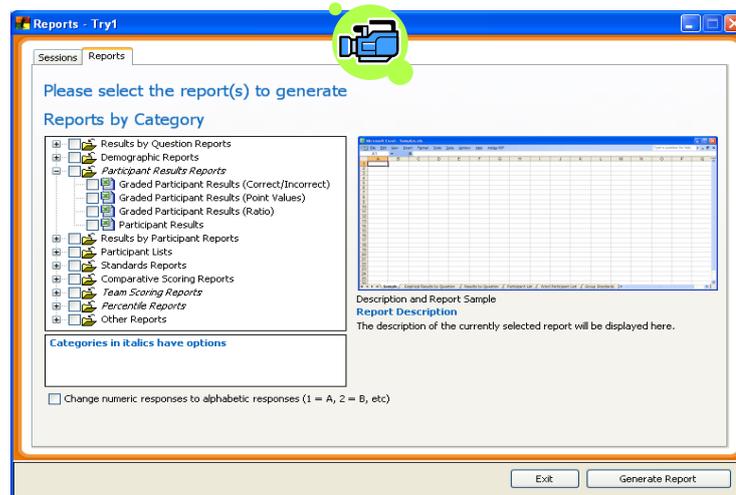
The interactive slides can be run (taking votes) under 'Slide Show'.

The number of responses will be displayed on the top right corner. The countdown timer can be activated by a mouse click. If the handset was pressed more than once, the last choice will be valid. When the voting is finished, a chart will be presenting the percentage of each choice. With another mouse click the correct answer will be displayed. Session data should be saved for future analyses.



6. Write a report in TurningPoint

If you go to 'TurningPoint 2008', then go to 'Tools' and choose 'Reports', you can see that there are many different types of report that can be generated. First of all you need to choose the session data that the report is based on. Then choose the type of report, for example, 'Participant Results Report', and tick 'Graded Participant Results...', and 'Generate Report'. The report will be seen as an Excel file ready for subsequent analysis



For PowerPoint footage of Promethean  click the link here

For an audio commentary on Promethean click the link here



Using Promethean in your Teaching

What does idiopathic mean?

- > A of unknown cause
- > B death of a tissue from insufficient blood supply
- > C caused by medical intervention
- > D infection acquired in a medical environment

You can use a standard PowerPoint presentation to create your questions. The activate system has up to a maximum of six buttons available for answer options. On the handsets these are labelled A to F. It works well to use a slide format with title and contents, putting the question in the title area. You will need to make sure you leave enough room above your question for the voting indicator boxes to appear. This is important to bear in mind when considering the length of your question.



Promethean handset or 'pod'.

1.2 Booking the Equipment

The Promethean Activote equipment is booked as a standard piece of teaching equipment. It is kept within LIS in the College Lane LRC. The resource includes a lap-top with the software and a maximum of 64 handsets. These are kept in two cases each containing 32 handsets (or pods). When you book the equipment you will need to specify how many handsets you require (32 or 64). Voting systems work well when students share a handset between two or three as well as when they have an individual one. When completing the booking form you can request technical support to get you started. It does take a few minutes to set up the equipment and distribute the handsets.



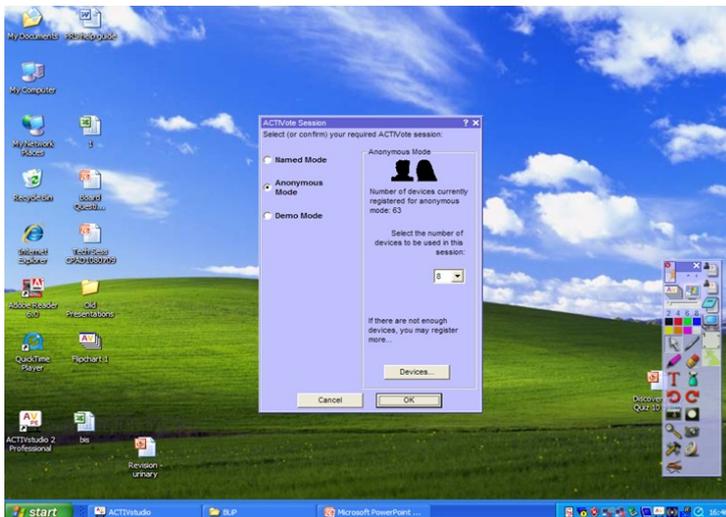
1.3 In the classroom

You will need to set up and switch on the lap-top as normal, making sure you remember to connect the data projector. The ACTIVhub, which receives the signals plugs into the back of the lap top in a standard USB socket. When you have connected it the six orange LED's will spin around while the system sets up. When the orange LED's stop spinning and the central white LED illuminates you are ready to start.

You click on the ACTIVstudio 2 professional icon on the bottom left corner of the desktop. This opens the tool box displayed on the right. You then need to click on the menu icon in the top right hand corner of the tool box. It looks the same as the image below.



From here you click on Activote and then Session.

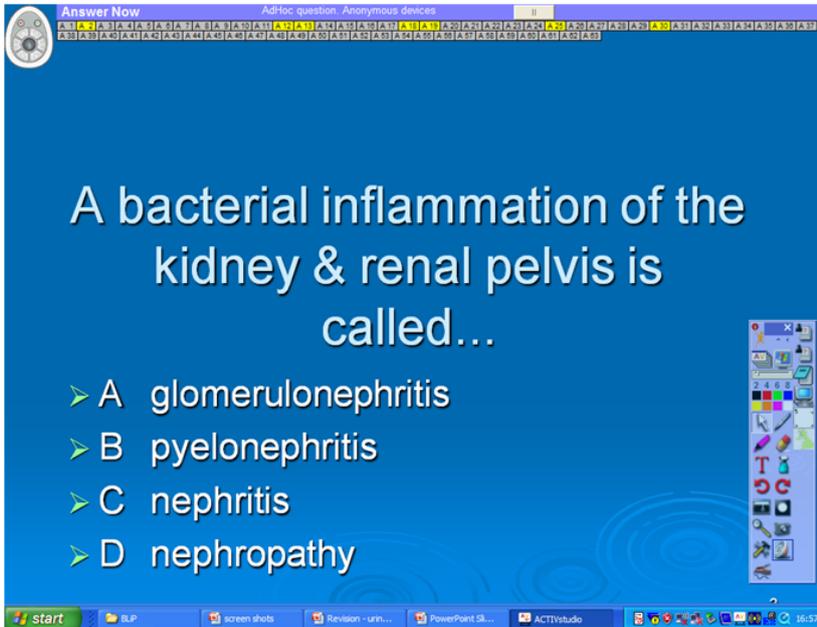


You select anonymous mode and then the number of handsets you will be using (up to a maximum of 64). Clicking OK sets the software to start.

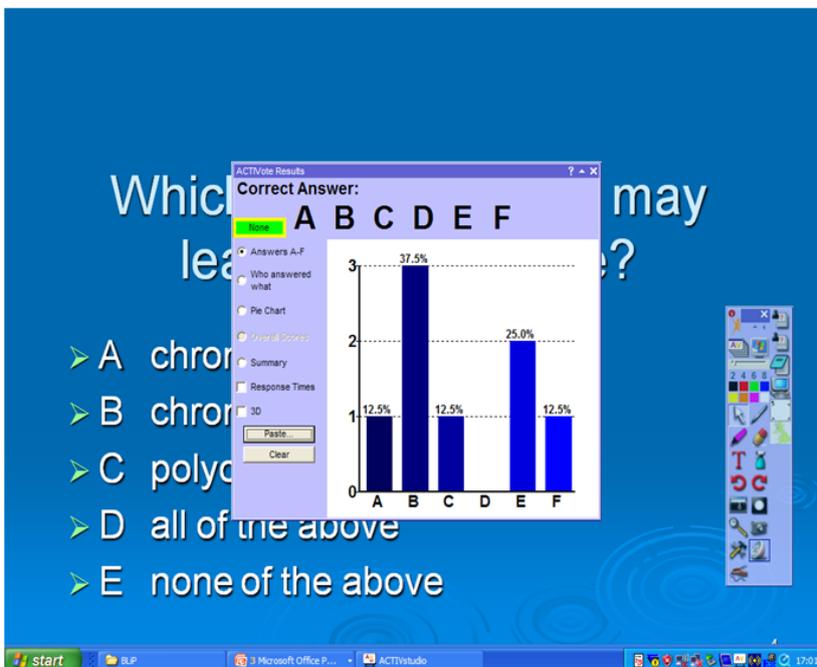
Now open your PowerPoint and bring up your first question slide. If the toolbox does not appear, right clicking the mouse on the screen will make it visible. When your question slide is displayed click on the pod symbol illustrated below.



This will make the voting answer indicator appear and you can ask your students to vote for the correct answer. As the students vote the number of the handset they are holding turns from grey to yellow.



Having allowed the students' time to answer the question you are now ready to display the results of the poll. Clicking on the pod symbol as you did before will display a histogram of the results.



When you have discussed the results of the voting move to your next PowerPoint slide, click on the pod icon on the tool box and you are ready for the next question.

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Working on a staff research project

What course are you studying and at what level?

I am studying for a BSc (Hons) Geography Degree. I am entering my final year in September 2010

What project were you involved in?

I was involved with a glaciology based staff research project in Switzerland. During the three-week research trip I had the opportunity to collect data for my final year dissertation and learn research techniques relevant to glaciology and physical geography. I also learnt about scientific instrumentation used in the study of glaciated and mountain environments and gained further knowledge of general field and research techniques.



Kiran Chakravarti

What did you do?

As a member of a team I gathered data using various instruments from a glacially fed river and a proglacial lake, near Saas Fee. I also individually gathered tree core samples which will form the primary data for my final year dissertation.

Why did you apply to participate in the staff research project?

I applied to take part in the staff research project because it would enable me to further my knowledge and experience in data collection and fieldwork techniques and skills. It would allow me to visit a country I have not been to before, whilst gaining experience in geographical research. I also felt that participating in the project would help me to decide if I wished to pursue a research-based career.

What work were you involved with?

During my time in Switzerland I collected core samples from trees that have grown in the region in response to recent glacier retreat. Analysis of the tree cores allows the rate of glacier recession to be estimated and compared with measures of recession gained from other lines of evidence, for example historical records. If tree cores can be used to accurately chart glacier recession then the technique could be applied to other basins where historical and other records of glacier retreat are not available.

Which aspects of the work you were involved in did you find most rewarding and why?

I am particularly interested in physical geography therefore I found the whole experience extremely rewarding. Learning about and experiencing different field techniques was most beneficial to my studies.

How do you think you benefitted from the experience, both on a personal level and in terms of your studies at the University of Hertfordshire?

The trip gave me the opportunity to put into practice what had been learned through self-study and lectures at UH. Taking part has allowed me to learn new research techniques relating to geography as a whole and more specifically to glaciology. Most aspects of geography have a 'field work' side therefore to experience this in greater depth has been invaluable. The trip will also help me with my final year dissertation, as I was able to gather my own primary data. Living away from home for three weeks in another country has built my confidence. The trip also helped to improve my team working and communication skills.

Simulation Games: Shifting from Conceptual Learning to Experiential Learning

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Abstract

Numerous views exist concerning the effectiveness (or ineffectiveness) of incorporating simulation games into learning environments. The shift from Conceptual Learning (or Learning by 'listening') to Experiential Learning (or Learning by 'doing') is gaining in popularity. Kolb's (1984) Experiential Learning Cycle framework is used as the platform to infuse the 'Climate' element outlined in Schwab's (1973) 'Elements of Educational Experience' to illustrate the importance of a blended learning experience. An anecdotal case study is presented based on experiences of using simulation games in a module taught at the University of Hertfordshire, UK in order to gauge the teaching and learning experiences and benefits. Teaching staff initially expressed mixed feelings regarding the teaching and learning outcomes from using simulation games. However when the outcomes were compared with Bloom's taxonomy of Educational Objectives these were found to have met all levels of the objectives.

Introduction

In 1973, Schwab outlined four main elements of educational experience. For many years, learning has been uni-directional; Shank (1997) called it the learning by 'listening' method. As learning experience progressed over the years, various authors have introduced different frameworks to enhance the student learning experience, such as Kolb's Experiential Learning Cycle in 1984.

This paper focuses on Schwab's fourth element, 'climate'. Detailed discussion will be presented on how this element can be modified to achieve a more experiential learning experience for learners (students). Kolb's (1984) Experiential Learning Cycle is used both as the platform for understanding the stages of learning experiences and to demonstrate how the 'climate' element from Schwab's work can be incorporated into Kolb's learning cycle to propel a learner's experience from conceptualisation to experiential.

Web-based simulation games form the primary focus of this paper and are demonstrated as a potential method to trigger the shift in the experiential learning cycle. Comments from various authors and users of simulation games are presented to support the benefits derived from combining this 'new' method with traditional learning methods. Anecdotal experiences from the author and his colleague, Mr. David Ogle, are also presented.

The concluding information in this paper will show how simulation games have affected the teaching and learning experience, and how the process of a simulation game which was incorporated in a module called Marketing Challenge in the University of Hertford-

shire (UH), has managed to achieve all levels of cognitive learning outlined in Bloom's Taxonomy of Educational Objectives.

Learning Approaches

Schwab (1973) outlined the four main elements in an educational experience as (1) Teacher, (2) Student, (3) Curriculum, and (4) Climate. Teachers lead this experience by setting the educational agenda and develop the knowledge which is then presented to the students. Students are receivers of this experience, and are in control of their participation and acquisition of knowledge transferred. The curriculum is defined as the knowledge, skills, and values transferred between teachers and students; and *vice-versa*. The educational climate is the final element which completes this experience, where students and teachers define, interpret, and apply the curriculum (Bloom 1968).

Discussions within the teaching and learning community have taken place concerning two distinctly different learning approaches, which Shank (1997) has called, Learning by 'listening' (or Conceptual Learning) and Learning by 'doing' (or Experiential Learning). The first method, 'listening', has been practiced since the Medieval Ages, also known as the 'Master Lesson', where the educational experience is predominately one-way and teacher-centered. At the other end of the spectrum is the 'doing' method where both teachers and students use alternative learning approaches, among which are practical assignments, internships, case studies, and simulation games which use experience as an essential element to achieving learning objectives.

Traditional methods of teaching and learning all have their strengths and limitations. Various authors recognise that traditional teaching methods (lecture, textbook and case study) may not be able to fully develop important higher order learning skills.

Lecture/Textbook

Under this format, students are usually 'passive learners'. This format is efficient for communicating a large number of concepts to a large number of students, but it is doubtful that their decision making, creativity, integration of cross functional materials, problem solving, decision making, risk-taking, or interpersonal skills are improved by only listening to lectures (Thorne et al., 1999; Cadotte, 1995).

Case Study

For many years, case studies have been the measuring stick, and provided for many, the cornerstone of management education. Although they measure the integration of theories with applied business examples that provide the context in which students can gain in-depth knowledge, case studies do have limitations, as students are not able to see the consequences of their decisions and test alternative proposals (Thorne et al., 1999; Cadotte, 1995).

Evolution of the educational experience

O'Hara (2007) proposes that pedagogy will have to shift from knowledge to learning, as not only what we learn but how we learn it will need to change. The suggestion is that interactive pedagogies must be introduced into the learning contexts, which are reflective not only with respect to particular content and individual self development, but also with regards to group dynamics and human relations. Education should become inquiry focused, problem embracing and case based with knowledge and learning derived from attempts to solve problems. This problem-based learning approach supports Chickering and Gamson's (1987) seven principles of good practice, where active learning is encouraged.

Progressing from the medieval age to the digital age, the educational experience has also evolved. Teachers are increasingly expected to push the educational experience to a higher and more practical level for both themselves and their students. Teachers frequently incorporate project-based learning, acknowledging the superior understanding students gain when they apply principles in practice. This belief is evidenced when Wiggins (1993, p.229) described authentic assessments as "...engaging and worthy problems or questions of importance, in which students must use the knowledge presented to fashion performances effectively and creatively. These tasks are either replicas of or analogous to the kinds of problems faced by adult citizens and consumers or professionals in the field." Mueller (2008) also supports the 'doing' method, saying that "when learning opportunities are infused with authenticity, students are immersed in real-life activities with the opportunity to apply, analyse, synthesise, and evaluate concepts."

Due to the fact that outcomes and assessments in real-life situations vary over time, teachers are able to adapt their delivery methods to individual needs and respond as students apply their acquired knowledge. Karet and Hubbell (2003) note that simulating real-life learning environments enhances several skills for students, particularly those noted by The CEO Forum as 21st Century Skills. These skills include digital-age literacy, inventive thinking, effective communication, and high productivity skills, defined as follows:

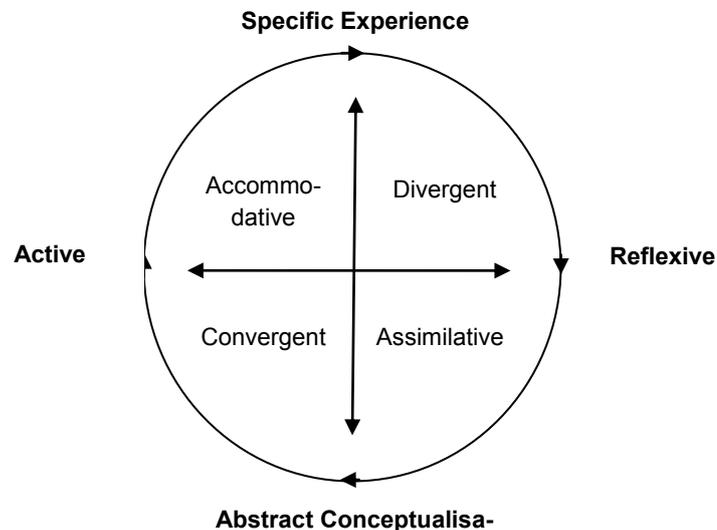
- Digital-age literacy: incorporating competence in information technology to enhance the traditional instructional strategies.
- Inventive thinking: addressing the need for a workforce that is capable of managing complex tasks, adapting to uncertain situations, and illustrating higher order of thinking and sound reasoning.
- Effective communication: including the need for students to collaborate in team environments and having strong sense of personal, social, and civic responsibilities.
- High productivity: demonstrating the skills to prioritise, plan, and manage to achieve the forecasted results.

These skills compare well to Kolb's Theory of Experiential Learning (1984), where high-

lighting experience is seen as the main element of the learning process. It can be concluded that learning is an ongoing process derived from experience which requires the resolution of conflicts among dialectical positions. In addition, it is also a holistic process of adaptation to real-life situations, which include exchanges between people and the environment. The main function of the learning process is the creation of knowledge.

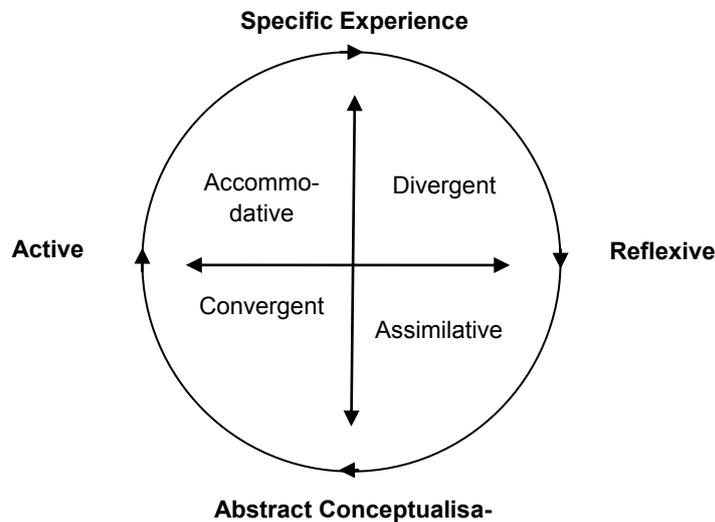
Kolb (1984) illustrates the experiential learning cycle to reflect the holistic stages involved; Specific Experience, Reflexive Observation, Abstract Conceptualisation, and Active Experimentation (see Figure 1). In this cycle, the objective is for students (learners) to reach the final stage of Active Experimentation. In order to achieve this, the main catalyst is 'convergence of knowledge' to propel the students forward from Abstract Conceptualisation. To convert the knowledge from an abstract form of learning to an active form of learning, the 'climate' mentioned by Schwab (1973) in the discussion above is the key element which could support or stagnate this transformation. Figure 2 illustrates Kolb's Experiential Learning Cycle where the 'Convergence of Knowledge' can be equated to 'climate' from Schwab's (1973) Four Elements of Educational Experiences.

Figure 1 - The Experiential Learning Cycle.



Source: Kolb (1984)

Figure 2 - The Experiential Learning Cycle incorporating 'Climate' element.



Source: Kolb (1984) and Schwab (1973)

Adapting the Alternative Climate of Delivery to Simulation Games

On the basis of the experiential learning cycle, simulation games can be used as a method of alternative climate of delivery. Kolb (1984) describes simulation games as “an appropriate method to facilitate experiential learning.” There are many different terminologies used to describe these web-based interactive games. Terms include simulators, business simulators, simulation games, macro-world/micro-world and learning laboratories. Gilgeous and D’Cruz (1996) explain that due to the connotations of each word, there is a high possibility of confusion as to what these games really are, and why they are called ‘games’. This confusion has led many people to avoid using simulation games because they are unaware of their full scope, potential, and benefits. It is therefore, important to define them in a realistic way.

Briefly, from a user’s point-of-view, simulation games are computer-based or web-based interactive games that are based on a simulation of a real-life situation, where participants role-play, make decisions, and receive feedback on the results of their actions, upon which, they have the opportunity to reflect on their previous decisions, and further improve their future decisions.

By definition, simulation games are used for training purposes and enable trainees to put theory into practice in a risk-free, less expensive environment. Simulation games are used to increase business awareness and develop management skills such as decision making, problem solving, and team working. An element of competition between individuals or teams of players is normally involved. Formats used include board games and computer-based simulations of the running of a business (BNET Business Dictionary, UK).

Thavikulwat (2009) explains that “a simulation is an exercise involving reality of function in an artificial environment, a case study but with the participants inside.” From the pedagogical perspective, Akilli (2007) refers to simulation games as “experiential exercises in which there is ‘learning how to learn’ that provides something more than ‘plain thinking’. It’s beyond thinking.”

The practice and experience of Simulation Games at the University of Hertfordshire, UK.

At the University of Hertfordshire (UH), the first year, second semester Business students are exposed to a module aptly named ‘Marketing Challenge’. This module is taught using a blend of traditional face-to-face methods and web-based technology methods, namely, SIMbrand, a simulation game software developed in Helsinki, Finland. SIMbrand is incorporated into traditional lectures to aid the development of student understanding of business decision-making as a whole, with particular emphasis on profitability (see figure 3).

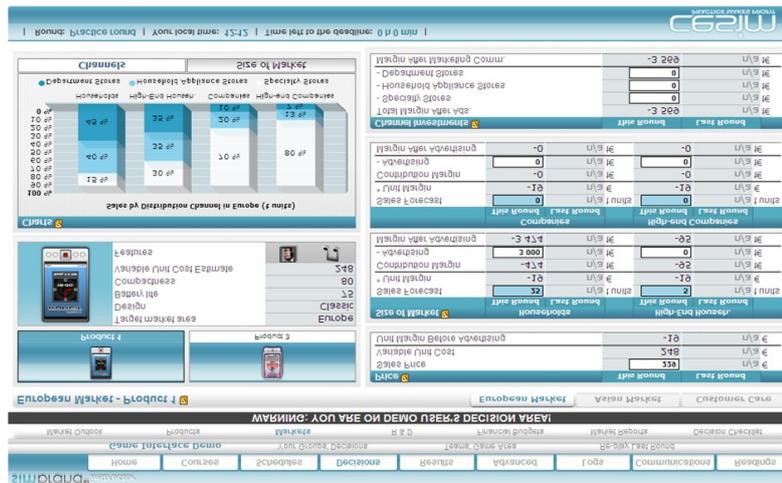
In this module, students are required to work in teams of three in a virtual company which manufactures and markets PDA (Personal Digital Assistant) phones. In the span of eight weeks, each team must strategise and implement their decisions after consulting the weekly varied market situations presented by SIMbrand. These market situations mimic actual scenarios that may be presented to a real-life company. These include among others, target market profiles; current and future trends of markets; rising costs for promotional activities such as advertising and public relations; fluctuation of resources such as quantity of raw materials and labour costs.

Based on these changing market situations, students are required to manufacture PDA phones to be marketed globally for a profit. The SIMbrand simulation game allows students the flexibility to develop their own PDA phones by adding or deleting features on the phones, the size and weight, and the exterior aesthetics. This flexibility to develop the PDA phones, however, comes with a cost which is then transferred into the price of their newly developed PDA phones.

Once the PDA phones are created, the next step is to analyse the other sector of the market, namely the target market profile. Each market and target audience varies in their expectations. For example, the target audience in Japan has a different profile when compared to the target audience in India or the UK. Therefore, students need to brainstorm amongst themselves to decide which PDA phone will suit each market and audience. Once this decision is made, the next step is to determine the future trends of these markets. Similar to case studies, web-based simulation games are designed to cover various aspects of a business context such as allocation of expenses for advertising, human resources, research and development and so on. Students need to complete the whole process from analysing target audience profiles, to forecasting the future trends of the targeted market, before any promotional activity can be planned. This

decision is made more dynamic by having the students calculate the cost of their promotional activities, coupled with the rising (or lowering) of resources available in that given week. To top it off, each team in this module is in competition with another team. The weekly duration of this simulation game is equated to an annual decision making period in a real-life situation.

Figure 3. An example screenshot from SIMbrand



The 'fun' factor is the intrinsic motivation which challenges students to learn and improve at each level of the simulation game. Malone & Lepper (1987) suggest that there are four basic factors needed for intrinsic motivation to occur during a learning activity, namely, challenge, curiosity, control and fantasy. These four factors make up the 'fun' factor of any simulation game.

2.2. Advantages and Disadvantages of Simulation Games

There is no statistical data for this module and associated simulation games *per se*, to support whether the student experiential learning process is enhanced when the 'climate' element is altered from the traditional 'listening' method to the 'doing' method. However, research from Kolb (1984) on Simulation games vs. other learning methods (where simulation games are compared with other popular learning methods e.g. the magisterial lesson and case study methods), showed that each of the teaching methods effectively produced one or several of the four stages in the Experiential Learning Cycle, with Specific Experience being the initial stage, followed by Reflexive Observation and Abstract Conceptualisation, with Active Experimentation being the most desired point. According to this research, the learning outcomes from the magisterial lesson method are geared towards Reflexive Observation and Abstract Conceptualisation stages, while case study and simulation game methods reproduce emotional, perceptual, and symbolically complex environments, which are geared mainly towards Specific Experience, Reflexive Observation, and the final stage of Active Experimentation. Thus, this suggests that simulation games have the potential to improve the student learning experi-

ence and knowledge acquisition. In addition, anecdotal observations from using simulation games at the University of Hertfordshire suggest that student attendance, participation, enthusiasm, and a healthy competitive spirit are all enhanced in the Marketing Challenge module at UH. David Ogle, colleague and Module Leader of the module, comments that "...the game is an excellent tool for teaching the students the elements of real live business activity, particularly in relation to financial decisions and decisions based on issues they have studied in their general marketing lectures."

Gilgeous and D'Cruz (1996) support the incorporation of simulation games into lectures by explaining that the introduction of simulation games into current teaching methods provides a teaching tool to contextualize what is learned with lecture and case studies applying knowledge into real problems through 'learning by doing' and enhancing understanding of cause and consequences. By complementing lectures with simulation games, information from lectures can be used in games to deepen student understanding, as numerous concepts can be dealt with in one game. Students can learn about the quality of their decisions directly and see how decisions can result in constraints on future decisions.

Many authors assert that using web-based simulation games to complement traditional teaching methods has the potential to enhance learning, attitudes, and behaviours. These findings, however, are on the merits of perceptions of learning as reported by the participants (students and players) and the instructors (teachers and facilitators), and may not be objective assessments. They measure affective, not cognitive learning behavior such as Motivation; Problem solving; Transfer of knowledge; Decision making and cross functional skills; Increased retention of knowledge; Adaptive knowledge; and Behavioural attitudinal and knowledge change.

Table 1 - Affective Learning Behaviours from various authors collected from participants and instructors of simulation games.

<p><u>Motivation</u></p> <p>Stimulate the enjoyment, motivation and engagement in experiencing and learning from close to real situations, otherwise too costly, difficult or impractical to implement. Increase students' motivation, and the ability to explore, experiment and collaborate by testing hypothesis and investigating 'what if' scenario. – Source: Fripp (1993)</p>
<p><u>Problem Solving</u></p> <p>As simulations can be designed to replicate dynamic actual market situation, they help students to understand and experience the management concepts and the inter-relations among the various functions of business. – Source: Cadotte (1995)</p> <p>They address the lack of opportunities to learn real problem solving skills by actively involving students in the decision making process of business issues. – Source: Doyle and Brown (2000)</p>
<p><u>Transfer of Knowledge</u></p> <p>Enable student to transfer the knowledge learned into real business situations, as simulations provide opportunities for practicing business skills in a realistic risk-free learning environment. Source: Senge (1995)</p>
<p><u>Decision making and cross functional skills</u></p> <p>Learn and improve management capacity in the business functional areas. Learn and improve their strategic management capacity, improve their teamwork and leadership skills, and improve the quality of the corporate decisions they make. Source: Toki (2000)</p>
<p><u>Increase Retention of Knowledge</u></p> <p>Simulation games provide active learning that involves the learning by being engaged in the instructional process by exploring, analyzing, communicating, creating, reflecting, or using new information or experiences. Source: Cadotte (1995)</p>
<p><u>Adaptable Learning</u></p> <p>Accelerate learning ability to and encourage faster learner comprehension of complex skills than other learning methods allow. Source: Senge (1995)</p>
<p><u>Behavioural, Attitudinal, and Knowledge Change</u></p> <p>Actively engage in situations where they must act and observe the consequences of their actions. And since everyone shares the same experiences, learning occurs through dialogues among participants who share observations, feelings and thoughts and arrive together at conclusions about what has been learned. Source: Kolb et al. (1984)</p>

Source: Various as cited in Table 1.

Table 2 - Effectiveness of Simulation games in Marketing Challenge module against Bloom's Old and New Taxonomy of Educational Objectives. Sources: Bloom (1956), Overbaugh, R. And Schultz, L. (2008), and Author's anecdotal experience (2009).

Old Bloom's Taxonomy	New Bloom's Taxonomy	Simulation Games in Marketing Challenge module
<p><u>Knowledge</u></p> <p>Terminology and previously learned information.</p>	<p><u>Remembering</u></p> <p>Can students recall or remember the information?</p>	<p><u>Knowledge Recall</u></p> <p>Information gained from lectures will trigger the relevance of each decision.</p>
<p><u>Comprehension</u></p> <p>Grasping the information, discuss and make sense out of it.</p>	<p><u>Understanding</u></p> <p>Can students explain ideas and concepts?</p>	<p><u>Conception</u></p> <p>Students with differing levels of knowledge and ideas need to brainstorm to a consensus.</p>
<p><u>Application</u></p> <p>Turning information into new and concrete situations to solve problems.</p>	<p><u>Applying</u></p> <p>Can students use information in a new way?</p>	<p><u>Relevance</u></p> <p>Once a consensus is agreed, it needs to fit with the weekly differing market situations which reflect real life scenarios.</p>
<p><u>Analysis</u></p> <p>Breaking down informational materials into their component parts.</p>	<p><u>Analysing</u></p> <p>Can students distinguish between the different parts?</p>	<p><u>Validity of Investigation</u></p> <p>Different market situations tap on different sections of a business setting, such as profit and loss, advertising costs, market trends, target audience's preference, etc.</p>
<p><u>Synthesis</u></p> <p>Applying prior knowledge and skills to produce a new or original whole.</p>	<p><u>Evaluation</u></p> <p>Can students justify a stand or decision?</p>	<p><u>Assessment</u></p> <p>Once a decision is made and sent. Results with feedback will be tabulated and reverted. Students need to reassess the previous decisions and decide on the next decision for further improvement.</p>
<p><u>Evaluation</u></p> <p>Decide, evaluate and support the result of the end product.</p>	<p><u>Creating</u></p> <p>Can students create new product or point of view?</p>	<p><u>Reflection</u></p> <p>A reflective report is required at the end of this module to judge the value of their decisions.</p>

Based on Bloom's (1956) categories in the taxonomy of Educational Objectives, where six cognitive domains were defined to represent the level of knowledge and understanding of a learner, a comparison has been made to reflect the 'Old and New' Bloom's taxonomy against the incorporation of the simulation game in the module, Marketing Challenge (Table 2). It is evident that by completing simulation games, the level of knowledge and understanding spreads across all levels of Bloom's Taxonomy of Educational Objectives.

Like any system, there will be glitches however, as highlighted in the following comments from David Ogle (Module Leader) and Nasserkhan Jamalkhan, (Co-tutor of the Marketing Challenge module):

"...the game presupposed a basic level of understanding of non-marketing aspects of a business such as financial statement...a lot of time was spent in explaining the financial and accounting issues." – David Ogle (2010).

"...did not offer the flexibility to customize the scenario and parameters to suit the module and its level of assessments...students may not have the level of understanding of certain aspects of business, thus, having to work on trials and errors." – Nasserkhan Jamalkhan (2010).

3. Conclusion

The above discussions have summarised a variety of views concerning the used of web-based interactive games in teaching. There is no one perfect learning method; teaching and learning is and should always be flexible and relevant to both the teachers and learners. Most importantly, it should be up-to-date, regardless of the mode of delivery.

Simulation games existed in the mid 1950s, and the use of this 'new' learning method has been growing ever since (Baker, 1994). As Kolb's (1984) cycle of experiential learning illustrates, it is essential to modify the method of learning in order to achieve the optimum experiential learning by moving from Abstract Conceptualisation to Active Experimentation. In order to achieve this, Schwab (1973) suggests that to convert knowledge from conceptual to active experience, the 'climate' element needs to be modified to trigger this shift between learning method and environment. Simulation games have been avoided as a method of learning by some, due to confusion caused by terminology that may not adequately reflect the benefits of these tools. However, once the confusion of terminology is cleared, many authors have found the application of simulation games to have a positive educational benefit.

Despite the various merits and drawbacks of incorporating simulation games within a Business module at the University of Hertfordshire, overall the Marketing Challenge module (within which simulation games have been used) has achieved all cognitive domains in the learning levels of Bloom's Taxonomy of Educational Objectives (1956). In

addition, student attendance, participation and enthusiasm surpass that shown when only traditional learning methods were used on this module.

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Enquiry-based Learning in Undergraduate Midwifery Education

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Abstract

Enquiry-based learning (EBL) describes an environment in which learning is driven by a process of enquiry owned by the students. Starting with a scenario or an object as a trigger, and with the guidance and support of a teacher as facilitator, students identify their own topics and learning needs. They examine the resources needed to research the topic/s, thereby acquiring the requisite knowledge. In this way, knowledge gained is more readily retained because it has been acquired through experience and in relation to real problems. Accordingly, students are encouraged to take responsibility for their group to organise and direct the learning process. Advocates of problem-based learning (PBL) and EBL claim that these approaches help to enhance content knowledge; and foster the development of communication, team-working, problem-solving, and self-directed learning skills. The paper considers the concept of EBL and its use in undergraduate midwifery education, within the School of Nursing, Midwifery and Social Work (NMS) at The University of Hertfordshire, and discusses some of the advantages and limitations of its application.

Introduction

In the 1960s, the traditional style of teaching, where students were often predominantly expected to reproduce fact-laden instructional materials (Bruner 1961), was perceived to be failing. Bruner (1961) argues that "practice in discovering for oneself teaches one to acquire information in a way that makes that information more readily viable in problem solving". This realisation led to a move to explore new approaches in teaching and learning. Inspired by the theory of constructivist learning (Piaget 1950) and the idea of experiential learning (Kolb 1984), a range of teaching practices emerged.

Enquiry-based learning (EBL) was born out of this 'discovery movement.' EBL is considered as a constructivist based approach to education which is student-centred and encourages active learning. Constructivism is an education theory based on the premise that learning is achieved by 'mental construction', whereby students learn by 'fitting in' new information to what they already know (Caine and Caine 1991). Therefore, learning is affected not only by the context in which the idea is taught, but also by the existing knowledge, beliefs and attitudes of students.

Within EBL, progress of learning is assessed not only by the amount of knowledge the students acquired, but also by how well they develop experimental and analytical skills during the process (Price 2003, Savin-Baden 2003). EBL involves a range of philosophical, curricular and pedagogical approaches to teaching and learning. Its core premises include the requirement that learning should be based around student enquiry (Khan

and O'Rourke 2004). EBL pedagogy and curriculum require students to work together on their own in small groups to solve problems, rather than just receiving direct instructions on what to do from their teacher (Bruner 1961).

In an enquiry-based learning environment, the teacher takes the 'back seat' and adopts a facilitator role. Instead of imparting knowledge, the teacher helps students with the process of discovering knowledge themselves. EBL has gained much popularity in recent years. However, there is still plenty of debate about its efficacy, as demonstrated in Mayor's (2004) thesis on the 'three-strikes rule' against pure discovery learning.

Characteristics of Enquiry-Based Learning

Learning within EBL is essentially student-centred, with an emphasis on group work using books, and other information resources. EBL emphasises constructivist ideas of learning. Knowledge is gained and built in a step-wise fashion. While incorporating some of the elements of problem-based learning (PBL), which was famously and extensively used by McMaster University in Canada (Camp 1996), EBL covers a wider spectrum of approaches (Kahn and O'Rourke 2004). EBL activities include small-scale investigations and project work. Kahn and O'Rourke (2004) suggest that these small-scale investigations allow scope for adaptation to a disciplinary context, which in turn can apply to a scale ranging from specific modules to an entire educational programme in curriculum design.

With Problem Based Learning (PBL), students are usually asked to investigate a single issue (Camp 1996; Savin-Baden 2003, 2007), whereas, through EBL's enquiry process, knowledge is integrated from different curricular themes or areas, thus helping students to clarify tacit knowledge (Kahn and O'Rourke 2004). The student-centred instructional strategy within EBL allows students to collaboratively solve problems and reflect on their own experiences. The underpinning philosophy of EBL is that students work together in a facilitated group. They identify issues relating to a scenario/trigger which they wish to know more about or learn in more depth. The process allows students the opportunity to explore aspects that they are interested in. There is clearly some overlap between the principles of EBL and PBL, in that both approaches are student-centred and encourage active learning in small groups. Albanese and Mitchell (1993), however, consider this overlap to be one of the main advantages of grouping these approaches to learning under the same umbrella term of enquiry-based learning.

Within EBL, the teacher does not begin with a statement, but instead with a question or a scenario/trigger to intrigue, stimulate and/or challenge the students. According to Bruner (1961), posing questions or a situation for students to solve, is in many ways, a more effective method of instruction. As mentioned earlier, within EBL, students define their own learning, and/or topics to be studied. Approaches used to solve the problems are determined by the students and not the teacher. This is an example of the 3rd level of the Herron's Scale (Herron 1971), which classifies inquiries into different levels de-

pending on the amount of guidance provided by the teacher, and whether there is an already existing solution to the problem or question.

In addition students not only investigate the question/s posed by the teacher, they also formulate their own research topics and convert that research into useful knowledge. In this way, deeper learning and understanding of the subject-matter is achieved (Marton and Säljö 1976). Students are given a defined time scale to work on their scenario/trigger and are expected to report back at a 'feedback' or 'outcomes presentation' session at a later date. Furthermore, the knowledge-development and leadership skills required for tackling complex problems, can be fostered through this learning process (Kahn and O'Rourke 2004).

This approach to teaching and learning does not mean that the teacher is then being made 'redundant'; enquiry-based teaching does not have to take on an 'all or nothing' approach. Schwab (1962) called for inquiry to be divided into four distinct levels. This was later formalised by Herron (1971) who developed the Herron's Scale to evaluate the amount of enquiry within a particular inquiry exercise. Since then, there have been a number of variants proposed. The consensus in the education community, however, is that there is a wide spectrum of enquiry-based teaching methods available (Savin-Baden 2007).

Benefits of EBL in the Teaching and Learning of Midwifery Education

In order to provide the highest standard of care to support women and their families with varying psychosocial issues, midwives are expected to work with other professionals such as doctors, health visitors and social workers. Working with a multi-disciplinary health care and social team to provide holistic care (NMC 2004) demands good interpersonal and communication skills for discussion, negotiation, and information sharing. Researching information for evidence-based practice and reflective practice are all crucial elements of the midwives' role (NMC 2004). The principles of midwifery education, therefore, are aimed at equipping student midwives to acquire knowledge and skills necessary for registration and practice. The educational programmes must be designed to enable students to become competent and confident midwifery practitioners in order to meet the required care standards (NMC 2009).

Fundamentally, within EBL, student midwives conduct discussions, exchange knowledge and formulate their learning goals (with guidance) as a group. This helps them to develop reciprocity and co-operation among each other and encourages active learning (Chickering and Gamson 1987). The process of EBL encourages team-working experience, which is essential as midwives are required to work in multi-disciplinary team settings (NHS 2010; NMC 2004, 2008). It also motivates students to do research themselves, thereby bringing with it a real research-orientated approach to the subject. The pattern of self-directed learning not only develops deeper learning (Marton and Säljö 1976), but also the key skills for postgraduate study. This may lead to original thought,

in turn, resulting in larger research projects, papers and publications in future. The EBL process also assists students to cultivate the skills for life-long learning (NMC 2005).

The EBL approach to learning gives students the freedom and the responsibility to organise their own work pattern, within the time constraints which the tasks allow. EBL also enables students to develop a more flexible approach to their studies. This is particularly useful as student midwives tend to be more mature and many have their own families. They learn to manage effectively their own learning processes, individually and collaboratively. This more flexible approach helps to respect diverse talents and ways of learning (Chickering and Gamson 1987) and may even allow students to enjoy their learning, making it more rewarding and fun.

For the teaching staff, EBL can also encourage contact between students and teachers. This helps teachers to communicate high expectations and to emphasise time on task (Chickering and Gamson 1987). The 'feedback' or 'outcomes presentation' sessions provide further opportunities for teacher and students to give and receive prompt feedback. The EBL process also offers the teachers opportunities to gain a better understanding of the learning process, the diverse and changing needs of the students. Indeed it can be argued that the EBL process encompasses the seven principles for good practice in higher education (Chickering and Gamson 1987).

EBL in undergraduate Midwifery Education at the University of Hertfordshire (UH)

Fitness for Practice (UKCC 1999) recommends the use of enquiry-based learning within pre-registration education. EBL is seen as an effective strategy to enable student midwives to develop communication and team working skills and the ability to link theory to practice. The EBL process also provides opportunities for student midwives to foster critical reflective and life-long learning skills. In essence, EBL has many features that are highly applicable and relevant to midwifery education.

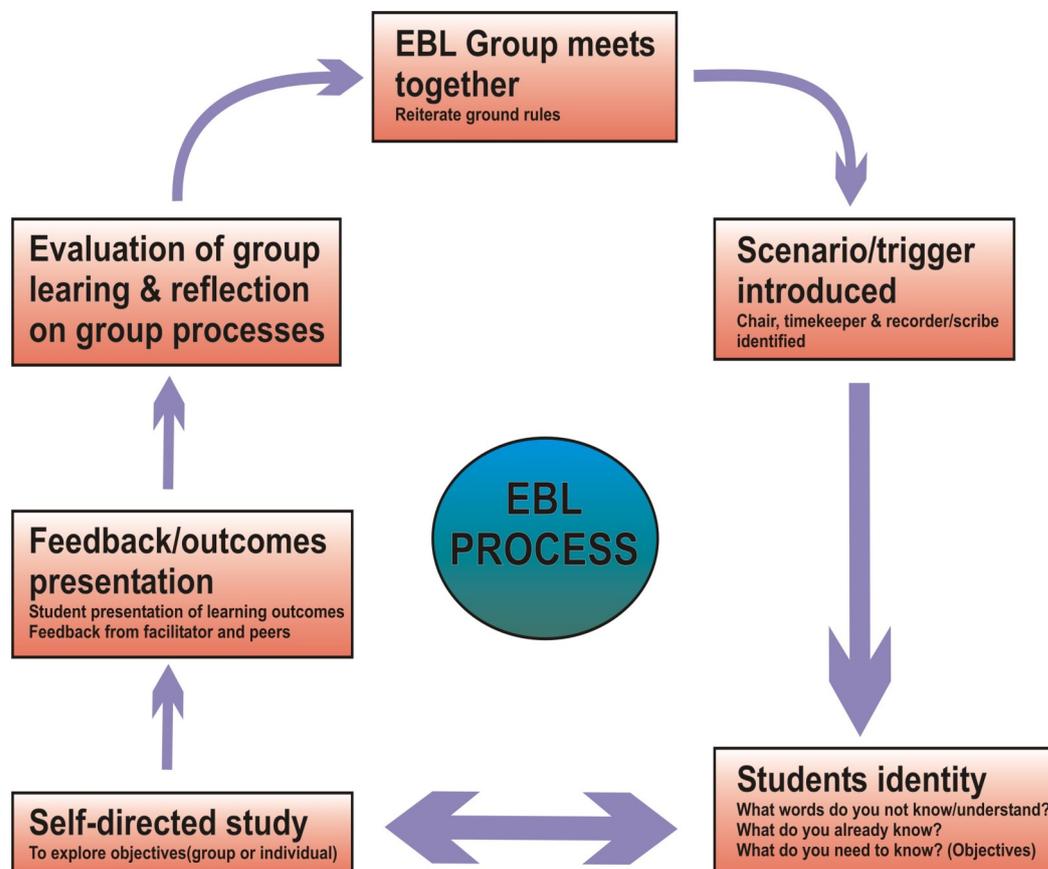
Within the midwifery department of the School of Nursing, Midwifery and Social Work (NMS) at the University of Hertfordshire, the EBL approach has been introduced into the undergraduate programme since September 2008. Currently, there are two modules running entirely on the EBL process, one in the first year and one in the second year. Some of the EBL principles are also applied to topics in other modules where appropriate. At the University of Hertfordshire, the midwifery department adopted a similar process to that adopted at The City University in London (TCU 2007). Students from the same cohort are divided into groups of 10 or 11 depending on the number of students. For example, there were 65 students in the September 2009 cohort; hence six EBL groups were formed. Students remain in their assigned EBL group throughout their study programme. This way, it allows the groups to come together to 'form, storm, norm and perform' (Tuckman 1965).

With each new scenario or trigger (which could be a poem, a picture or an object), students will have a face-to-face facilitation session with their teacher (see figure 1 for an

illustration of an EBL process). During this session, the students would be reminded of the ground rules they have previously set and agreed. A chair-person and a 'scribe' would be nominated within the group to monitor the progress of the task in hand, and to record the discussion respectively. Student midwives take turns in being the chair or the scribe. With the teacher (as facilitator) present to answer any queries, students 'brain storm' their ideas and decide on what topic/s to inquire or to investigate. They then divide the tasks amongst themselves.

At UH, student midwife EBL sessions are time-tabled on the training programme so that students can plan and organise their own learning at their own pace. They are encouraged to use self-directed time to work in small groups to investigate and reconstruct information about specific aspects of the scenario/trigger. Depending on the complexity of the subject being explored, student midwives are usually given one to two weeks to work on a task. The University of Hertfordshire managed learning environment, StudyNet, is also utilised for group discussion. Finally, students come back together to present their learning to their teacher and/or other group members. Feedback from teacher and/or peer helps students to reflect on both their team working and how their learning has taken place. This skill of 'reflection-on-action' (Schon 1987) is vital in helping students to develop into critical reflective learners and practitioners (Brockbank & McGill 2000).

Figure 1: An EBL Process



(Adapted from The City University (TCU 2007))

Advantages and Limitations of EBL in Midwifery Education

As with most teaching and learning methods, there are inevitably merits and drawbacks.

Advantages

EBL affords student midwives opportunities for team working and development of collaborative working skills (Albanese & Mitchell 1993) which form an integral part of midwifery practice. It also helps students to gain a better understanding of the topic/s being studied. EBL also encourages the skill developments in areas such as literature searching, problem solving and presentation of information to colleagues and others. These skills are all essential for clinical practice to support the public health role of midwives. Furthermore, the EBL process enables student midwives to develop skills in clinical reasoning, critical appraisal and information gathering. As students learn to relate theoretical knowledge to clinical practice, it helps in closing the theory–practice gap (Landers 2000).

Questioning, reasoning, and thinking critically about what they see, hear and learn, as well as weighing up evidence and the opinions of others all enable student midwives to reach their own conclusions. Such processes help to develop critical thinking and analytical skills (Price 2003, Savin-Baden 2003). This is evidenced in our second year students, as they demonstrate increasing confidence in articulating their learning outcomes from their enquiries.

The Nursing and Midwifery Council (2004) requires every midwife to be a reflective practitioner. Reflecting constructively on their own learning, and acting on feedback from their teacher/s and peers through the EBL process, student midwives will be able to nurture a culture of reflecting from an early stage of their midwifery career. Their reflective skills will also be enhanced by reflection sessions, facilitated by linked teachers, at their clinical placement sites.

The EBL process enables student midwives to understand and communicate more effectively with individuals from differing backgrounds and perspectives. This is of particular relevance as midwives work within a diverse population. Sharing their knowledge and experience with fellow students and staff also develop and enhance the students' presentation skills. This can be beneficial to student employability in the future when competing for jobs after qualification. Recent feedback (at a service and education meeting) from a recruitment officer of one of our training partners, indicated that midwifery graduates from the University of Hertfordshire out-performed other candidates in their performance at job interviews. As mentioned earlier, the EBL feedback or outcomes presentation sessions offer opportunities for students to receive prompt feedback and evaluation, from their teacher and/or peers, on their learning. Prompt feedback is important to help students to improve and/or consolidate their learning (Chickering and Gamson 1987). EBL also affords the teachers the flexibility to support students to foster a wide range of skills when engaging them in their learning process.

Limitations

Sweller (1988) proposed the theory of cognitive load to explain how novice learners react to problem solving during the early stages of learning. Certainly active problem solving is useful as students become more competent, and better able to deal with their working memory limitations. However, early in the learning process, students often find it difficult to process a large amount of information within a short period of time. Thus the rigors of active problem solving may become an issue for novice learners. This is supported by Mayor's (2004) view that guided discovery was more effective than pure discovery in helping students learn and transfer knowledge into practice. This view is substantiated by student verbal and written feedback and the process of module evaluation at the University of Hertfordshire.

To help students avoid cognitive loading issues, the teacher as facilitator can provide the 'scaffolding' by giving more guidance and support in the early stage of the process (Sweller 1988). Herron's (1971) model that classifies inquiries into different levels, ties in with the debate on the need for 'scaffolded'/guided inquiry when students of any age are new to the EBL process. Within the midwifery department of the School of Nursing, Midwifery and Social Work at the University of Hertfordshire, measures have been taken in the 2009/10 academic year to provide more 'scaffolding'/guidance to first year students. Although it is the students who determine their learning needs, the teacher can do much to assist in setting parameters to guide them to process within appropriate confines. Whilst the second year students are much more confident with the EBL process and require very little facilitation, the teacher only needs to ensure that the students stay on track during their 'brain-storming' discussion session. Facilitator guides are produced for teachers for each specific EBL scenario/trigger, helping to ensure equity and correct process across all groups.

Occasionally, conflicts between group members can arise and pose problems. Nevertheless, this could be avoided with good facilitation, early establishment of ground rules, and good team-building work to allow the group to 'form, storm, norm and perform' (Tuckman 1965). However, appropriate teacher training for EBL facilitation may become an issue with increasing constraints on resources.

One of the means of supporting student learning is through assessment. Indeed, assessment is often seen to be the driving force for the student learning experience (Gibbs 1999). Biggs (1999) emphasised that learning must align with achievement of intended/desired outcomes. However, given that most learning with EBL takes place outside the classroom, the assessment strategy must be robust. Facilitating the conduct of the enquiry with evidence of group work (i.e. record of meeting etc), discussions on StudyNet (or similar MLE) and due process is essential to ensure learning outcomes are met.

Unlike traditional teaching, some student midwives find the process of EBL uncomfortable. This is especially so in the beginning when they are not used to working in groups

and/or looking for information for themselves. To ensure success with the application of EBL in midwifery students at UH, preparation and the appropriate recruitment process of selecting the right calibre of candidates into the training programme are crucial. Within the midwifery department of the School of Nursing Midwifery and Social Work at the University of Hertfordshire, a new selection process with a short EBL session built in has been implemented to assist in this process.

Finally, while EBL may appear to sit well within some of the midwifery modules, its effectiveness must still be evaluated and monitored at regular intervals. Midwives must acquire certain skills in order to practice competently. In the author's view it would therefore, not be appropriate to apply EBL across the whole undergraduate programme. For example, it would not be appropriate in the teaching and learning of certain clinical skills. These skills can only be acquired through demonstration and practice. Therefore, a blended learning approach in line with the University of Hertfordshire teaching and learning strategy should be adopted.

Conclusion

Within EBL, students are encouraged to take responsibility for seeking evidence and analysing their knowledge with the purpose of making implicit reasoning and tacit knowledge explicit (Price 2003). The students are placed at the centre of the learning process. They are presented with greater independence in decision-making process relating to their learning, hence the term 'learner independence'. A key role of the teacher is to facilitate and support the learning process to enable students to work collaboratively. This allows students to pool together their collective knowledge and understanding, as they work together to create new knowledge for specific purposes.

In summary, EBL can be thought of as a broad umbrella term that describes a range of approaches to teaching and learning. It is guided by a process of supportive enquiry. It is structured to foster 'learner independence' through active, and usually collaborative engagement with relevant and meaningful problems and issues.

EBL creates an environment in which learning is driven by a process of enquiry shared by the students. It also enables student midwives to take increasing control of their own learning as they progress through their study programme. Moreover, it encourages them to acquire professional and personal skills which are essential for clinical practice, and are highly valued in the competitive labour market. Creativity, independence, team-working, goal-setting and problem-solving skills are all essential to the personal and professional development of our student midwives and acquisition of these skills enriches the capacity for 'lifelong learning'.

Although the EBL process may not be appropriate for implementation across the whole midwifery programme, it is nonetheless, a very useful tool in undergraduate midwifery education. Since its introduction to the midwifery department of the School of Nursing

Midwifery and Social Work at the University of Hertfordshire, positive feedback has to date outweighed any limitations. Having evaluated module feedback from students and staff involved with EBL, this learning and teaching approach appears to be a very viable alternative to traditional teaching and learning methods.

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Developing and Listening to Student Voices through a Student-Staff Research Project

How can we listen to student voices in order to improve learning, teaching and the curriculum? If we, as members of staff, are to enable students to learn effectively we need to understand how they are engaging with their studies, how they are developing concepts and how they are connecting to their subjects, their fellow learners and their teachers. We need to find out how they understand and use their environments and resources for learning. Students nowadays are expected to respond to numerous institutional and national requests for information, designed with a 'market research' approach. As Batchelor (2008) notes, 'Students are trapped in a paradox: endlessly canvassed and consulted through course quality

evaluation questionnaires, it is as if theirs are the voices everyone longs to hear. But the restricted scope of the commercial language of evaluation can have the effect of silencing them.' Theirs becomes the voice of the consumer, rather than one of the voices in a partnership of enquiry into practice and how it can be developed. Rowland (2000) has pointed out that systems, such as student feedback questionnaires, can be seen as 'limiting rather than enhancing communication between teachers and students.' It becomes a one-way evaluation rather than a dialogue.

In order to hear what students would like to say about their learning experiences we need to facilitate their voices. They need opportunities to enquire into their experiences, to link their findings with those of others and to understand different perspectives. They need to develop appropriate ways of communicating what they know to people so that they will be listened to. In many ways they need to act as researchers.

In the Faculty of Humanities, Law and Education at the University of Hertfordshire, we identified that one of the aspects of students' experience that we were interested in was students' responses to feedback and how they were using it to develop their work. We wanted to obtain students' views on this. We also wanted to find ways of working collaboratively with students so that they could communicate effectively and we could deepen our understanding of the student experience. We decided to initiative a student-staff research project into feedback in the Faculty.

We decided not to select students who were already engaged with us as student representatives on programmes, for example, as we were looking to develop and hear different voices. The student union employment agency identified students from each school in the Faculty who would be paid to work with us for 16 hours during the Spring term.

The Process

Five students and three members of staff met together for the first session. This group size was chosen so that staff would not outnumber students and so that there would be opportunities for everyone to contribute. In order for staff and students to develop effective working relationships we needed to develop connections with each other. We found many ways in which we were connected including places we had visited, films we had seen amongst others. Sharing these topics in a relaxed environment started to help us see each other as people rather than roles. We could then move on to discussing the focus of the project and how we were going to undertake our research.

The student-staff team worked together to identify a research approach and to complete Faculty ethics procedures. We spent time exploring issues of confidentiality and the sensitive nature of our topic. We decided that students would collect data from other students about feedback as the student-researchers felt that students would be 'more honest' with other students. The student researchers would then work with staff to analyse the data and to put it into the wider context of their own experience and other research reports and articles on the topic.

The student-researchers asked 86 students from across the Faculty the questions we had developed from our discussions. These were: 1) What do you consider to be feedback? 2) What was the impact of feedback? and 3) How have you used feedback. They asked these questions of an opportunistic sample over a period of two weeks. Before starting the data collection we had discussed issues that could arise including how to deal with situations when people won't engage with you. It is not easy to approach people you don't know to ask them questions and it was important to explore what could happen so that shared approaches could be discussed. The students were very persistent and worked hard to collect a significant amount of data.

Many projects looking at feedback ask student informants for information and then staff analyse the data and interpret the findings. We were aiming to build students' abilities to identify and share knowledge about the topic so they needed to be participants in the whole project. We met as a group to analyse the data. We read data aloud and shared ideas about emerging themes. Everyone was new to this data set so we were all able to suggest themes and students and staff were equally perceptive. It was very important at this stage for us all to pay attention to each others ideas and to use supportive listening skills. We were modelling how we were valuing contributions and building our understanding together. A research fellow talked with us about coding data and students and staff worked in pairs to begin to do this. We spent three sessions analysing the data.

A key part of the work was the discussion between students and staff about experiences of feedback. Students were able to talk in detail about different aspects of their feedback experience and also hear some staff perspectives. The discussion was undertaken in a professional way and no names of staff or students were used. This discus-

sion was more than a focus group in which we gained the ideas of some students. Instead it was a deeper learning experience as over a number of sessions we all sought to understand the issues better by drawing on data we collected, our own experience and some of the research in the field that we read and brought into the discussion. Between sessions each member of the group kept a reflective journal about the project. This was personal to them but they could use it in the discussions as appropriate. We all found that we started paying more attention to feedback and thinking about the topic than we had done previously. Some students talked on-line or in person to friends at other universities about feedback approaches. This was enabling all involved to articulate our understanding of the topic.

One way of articulating and sharing our knowledge on the topic was a written report.



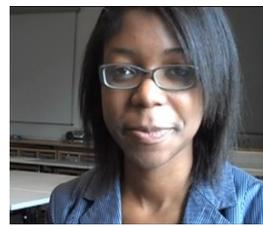
There was not time to involve the students in writing this report although they commented on drafts. In future projects it will be important to plan for students to write sections in order to develop their writing voices. Another way of sharing information was a PowerPoint and oral presentation at an internal Learning and Teaching conference for staff.



The student-researchers were introduced to the facilities available in the School of Education to make a video of their presentation, the 'Vox Box' and used it to record their work. They then presented this in a lecture theatre for staff and were able to respond to questions.



Humanities Student



Law Student

After the completion of the project we explored what we had learned about working together as a student-staff group. Students felt that they had gained skills in working with staff, in research approaches, communication and presentation skills. They also felt highly motivated to do more work in this way and hoped to be an influence in bringing

about change in the University. One of the students is planning to lead a project for first year students on how feedback at university is different from school and how one can make best use of feedback. Another student is aiming to work in her school and to help other students develop as student-researchers.

For all the staff involved it was a new way of working. From the onset we all agreed that the project was undertaken in this way because not only did we want to collect information on the topic but we also wanted to model a staff-student process to enquiring into, and developing, learning and teaching. Staff made time to develop relationships between the group members which was imperative as it enabled everyone's confidence to grow, allowing them to talk more openly. However, what most surprised and delighted staff was the level of risk-taking that grew from this way of working, with students confidently presenting the project to various audiences, using a range of technology.

We wanted to engage in 'transforming assumptions about students' role in the campus community...' (Nicholls, 2005), and this project has we feel gone a long way to achieving this. There's still more work to be done, but strong foundations have now been laid for making a step change in integrating the student voice into learning and teaching.

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