Exploration & Experimentation: Applying New Technologies to Learning – 2nd Stage Action Research

Andrea Moon
Brighton Business School, University of Brighton, UK
Email: A.Moon@brighton.ac.uk

Paper presented at the British Educational Research Association Annual Conference, University of Warwick, 1-4 September 2010

INTRODUCTION

There is a plethora of information on enhancing learning through technology and explaining the benefits of blended learning, but the practice still does not appear to be widespread. Bach et al (2007) remind us that technologies improve rapidly but that practice takes more time to become established. They also advise that whilst HEIs may seek to encourage the practice of on-line learning, costly mistakes clearly have to be avoided.

The principal aim of the author’s action research was (and still is) how to empower first year undergraduate students to become independent learners through the adoption of e-learning strategies. It began, however, as part of a collaborative research project investigating how to learn about new technologies available within the authors’ own institution (Greener, S and Moon, A. 2009) Some of the conclusions reached at that stage indicated that new technology and support for the same was available within our own institution, the students were open too for trials with some of the new technology, but further research was necessary to identify and encourage a range of skills specifically for IT and research in our students in order for them to get the best out of their online learning and as teachers to explore ways to ground the use of technology in sound pedagogy and not just adopting it for its own sake.

This paper takes the author’s action research further and discusses the issues of applying the available technology to the delivery of a traditional module; evaluating both the tutor’s and the students’ experience and identifying the learning points for improving teaching practice.

The main focus of this research was one module of a first year undergraduate FdA programme delivered during the first semester at a satellite campus. The programme is also delivered at three partner institutions. It was felt that the investigation should be restricted to the campus at the author’s institution for ease of control, contingencies in case of software difficulties and the very nature of the research being experimental and therefore dynamic. Once the research is complete and fully evaluated, the new practice can be disseminated easily via the teaching team.
The action research focussed on theories for applying technology to learning thereby allowing the development of the author’s teaching practice in respect of:

- How to utilise the technology;
- Developing an understanding of the pedagogy design required for this application;
- How to develop Blended and E-learning strategies;
- How to prepare students for using technology in their learning.

The literature was used to gain a better understanding of the options and advice currently available for applying technology and therefore initiate my experimental practice and later for developing e-learning strategies to be shared across the teaching team. It began with ascertaining what blended learning was and was not. Bonk et al (2006) advise that it is embryonic and experimental, yet it takes place all the time and just because a first experience may not be a good one, does not mean it should be the only experience. They continue; “Great recipes are the product of generations of experimentation, tasting and refinement”.

EMPOWERING STUDENTS

In recent years, it has become noticeable that more students are experiencing difficulties with the transition from FE/6th Form studies to the demands and requirements of HE institutions, particularly when it comes to understanding how to undertake independent enquiry. Many initiatives are being introduced to support students and to reduce the impact of any ‘culture shock’ that may be experienced but there could also be room for introducing and developing the required skills for independent enquiry within the delivered modules particularly during a first year/semester without compromising the subject content through lack of time. Wu et al (2008) discuss how learners should develop appropriate learning strategies to ensure proper use of ‘e’ course material but this would be an expectation in any event, ‘e’ or otherwise and if it is this that students are uncertain how to approach then introducing e-learning as a new learning/teaching strategy early on, may provide the opportunity to explain how to become less dependent on the teacher and to offer some practice but still within a supported environment. Part of the author’s learning curve was judging the amount of guidance for the students towards independent enquiry, knowing how much information to provide and in what format, at what point to step in and for how long to step back.

RESEARCH & INVESTMENT OF TIME

The research commenced with a review of what technology was generally available whether it was already being integrated into teaching, if it was available within the Business School, how were other colleagues utilising it and whether it was absolutely essential to follow suit.

Integrating technology into learning and teaching is not a new concept, radio, television, videos and CDs have been around for many years and can offer
interesting if not exciting enhancements to the dissemination of theory and computer networks can permit a practical alternative for involving students. But the development and introduction of the Internet and Web 2.0 applications offers a new range of diverse material and applications which enable collaboration, interaction and wider access to information.

The author sees herself as an IT innovator, someone who embraces and actively seeks to explore technologies and ways of utilising them, so was not put off by the vast amount of technological choice available, but still found initially it was a confusing choice of what was best: podcasting, e-lectures, discussion boards, wikis, social networking sites, emails, video conferences, Internet or VLEs that it was almost overwhelming. Attendance at national conferences as well as seminars hosted by Brighton Business School gave insight as to how colleagues were utilising the new technology, and debating whether IT devices for social activities are the most appropriate for educational purposes.

It was motivating to know that others had tried and had been successful but hard on occasions to identify exactly how that success could be emulated. It would have been easy to go back to the module and just consider how to address the face-to-face delivery but continued observations of colleagues together with a natural enthusiasm ensured that the research continued.

Focus therefore had to change from what was available to a review of pedagogical design particularly to avoid using technology for the sake of it and disengaging students in the process.

Research undertaken at Edinburgh Napier University (Smyth 2010) introduces the 3E approach (“Enhance, Extend, Empower”) a framework for thinking about the design of a course and progression within it and provided a useful tool for thinking about the implications of using technology to redesign the module for this course. This framework is one that is being adopted and the module developed accordingly.

Wu et al (2008) suggest preparation of a learning model which should describe the essential instructional and learning process. They continue that the learning model should be analysed through the components of educational environments, course development, teaching and learning, interaction, collaborative learning and evaluation and assessment activities. All these are good starting points for the redesign and pedagogical content for the module and allow consideration to be given to the first few sessions: introducing the technology to the students and skills development for the lecturer.

Participation in an experiment at UOB to explore how the integration of new/mobile technology could enhance the students’ experience within a group assignment found that the students were open to using ICT and had liked the idea of using the technology for a group assignment, but that to avoid unnecessary distraction or disillusionment because of technology difficulties, the students had to be familiar with the system beforehand in order to get the best from it. Training sessions were
organised for all parties (at the same time) prior to the issue of the group assignment and were found to be of huge benefit not least for me as it enabled me to hear the questions and experience the concerns alongside the students.

BLENDED OR E-LEARNING?

Wu et al (2008) “it is necessary for E-Learning participants to recognise and evaluate changes in education and technological landscape and speculate on what extent each stakeholder meets the emerging capability gaps in a timely way. Possessing this knowledge is crucial for stakeholders to successfully adapt from the traditional classroom to E-Learning environment”

Bearing this in mind, the decision was whether to go fully online and transfer all learning materials and student participation to the VLE in almost a sink or swim scenario, or to divide some of the learning activities between VLE and traditional methods, a more blended approach. The question then would be which activities and in what format. The solution would come from acknowledging the student cohort, who they were, how long they had been with the institution, assumptions as to their previous IT knowledge and ability and back to the original problem: what was it the redesign was trying to achieve.

Smyth (2010) discusses the opportunities for learners to ‘source and create at least some course content’ as does Wu et al (2008) when they consider that in e-learning environments, students could have more control over the objectives and learning outcomes.

However, given that the cohort in this context, are first year undergraduates, would they be ready for this? A stage too far too soon perhaps? By wanting to empower the students to take control over their learning, I felt that they first had to understand how to approach their learning, so this module would be seen as the stepping stone, ultimately leading to them to take more control over the learning objectives. Initially, it would have to be about learning how to take control over their learning time and their pace of learning and developing their motivation to work independently. By using the concept of e-learning under the assumption that this would be new to all of them, it enabled me to start them all at the same point through demonstration of the new technology – the institution’s VLE – and how this would be utilised for a specific task, so previous experience was irrelevant.

Wu et al (2008) warn that with “virtual e-learning environments, students have to be highly motivated and responsible because all the work they do is on their own. Learners with low motivation or bad study habits may fall behind”. This is acknowledged, but would they anyway? Students who are not highly motivated struggle to attend lectures, read around their chosen subjects or participate in groupwork outside of timetabled hours or during them. But it is a warning worth heeding, how to ensure that students will engage and contribute to anything online.

Smyth (2010) also warns of this when he addresses some of the pitfalls identified during his research, some students will only reluctantly take to fully online work and
that the overall approach adopted for their course would not work well with very large cohorts.

Not all teaching methods are appropriate for every learner all of the time, but the diversity across a course should help each learner to find a method that suits them and to adapt it to their own preferred learning style. The issue for blended learning is to identify and recognise how IT will enhance the delivery and learning. If it cannot, or there is some uncertainty then it would be best not to use it for its own sake. It must also suit the lecturer’s preferred teaching style, IT is a ‘tool of the trade’ to compliment a delivery not necessarily replace it. However, the concept of blended learning is one that will continue to develop and is likely to become more mainstream than option. The fact that there are many components to e-learning means that continued exploration and experimentation by educators will be inevitable.

DEVELOPING LEARNING STRATEGIES & DEFINING THE ROLE OF THE LECTURER

The module in this context was reviewed on completion of the first semester when the lecturer felt that there had been too much emphasis on her disseminating information through a more traditional lecture delivery. There had been opportunities for group work and the student feedback indicated that they would have preferred to have had more such opportunities and had not felt as though they had been stretched enough or been able to develop themselves.

It was this review which prompted the decision to look for ways of giving the learning back to the students, but to what extent? One student had asked at the start of the year what the self-study hours meant, what were they expected to do illustrating that first year undergraduates will not be able to have so much control over their learning objectives and outcomes due to lack of experience, but who was doing the learning, me or them? Could they not do as I was doing, find the information for themselves, prepare notes/presentations and deliver it back? The answer was considered to be yes but only if receiving some guidance as to the content they needed to concentrate on.

During the last academic year, the module was delivered with a different approach. At the start of the year, it was decided that the theory element should be disseminated via e-lectures and podcasts supported by handouts and specific links to a variety of text books and websites. The students worked on this in their own time (the self study hours). The practical element took part during the seminar/contact hours and involved breaking the cohort into smaller groups researching a current topic, linking the theory to the topic and presenting back their findings to the rest of the group. The skills developed could be identified and evidenced as part of their PDP module and complimented the rest of the programme. For this module, all students were required to produce a portfolio of research evidence which would receive 30% of overall marks but which could also be taken into the exam as the “open book” for which 70% of the overall marks would be awarded. This would
provide the tangible reason for undertaking the theory research during self study hours.

Feedback received from the students indicated that they enjoyed the practical elements for researching and disseminating back to the group. Some difficulties experienced with the podcasts/e-lectures which will require attention before the next academic year.

Davies & Eynon (2009) advise also that not all learners will be ‘digital natives’, each will have made use of different technologies in different ways for different reasons and that learners may undergo a shift in priority uses of technologies as they progress through school, college and towards HE or work, but that this will not occur at the same time for all if indeed at all.

Taking into consideration that the cohort in this context is a mixture of mature students and college leavers, it was felt that the face-to-face delivery should start the process to allow for group formation and for the lecturer to demonstrate the IT elements before introducing the online activities. It would be unreasonable for even the most experienced IT student to be able to immediately start using the Business School’s particular VLE effectively. Therefore, no assumptions should be made as to each individual’s IT skills, other than they are unlikely to have used our specific VLE previously, but this would give an even basis on which to begin.

This would mean ensuring that an induction session took place for this module and careful planning would be required to ensure that the every student would be able to take something from this module and develop their own learning styles and academic skills. Mayes (2007) cited in Smith 2010 advises setting assignment specifications and student guidance on what is expected of them and what can be expected of the lecturer and this is also recognised as essential in assisting students through their transition.

Demonstration early on by the lecturer ‘role modelling’ effective use of the technology, showing students the results of using the technology and discussing and evaluating these with them, can provide the guidance and expectations. As Greener (2009) states; “in learning and teaching, we are not modelling perfection, but strategies for learning” and effective use of demonstrating/modelling use of the technology with the students may help to achieve this outcome by encouraging them to try for themselves.

FURTHER DEVELOPMENTS

Further development of the module has been carried out after implementing the 3E framework (Smyth 2010) including considering the basic teaching principles cited in his research, to ensure that all students could engage online, adopting peer learning methods to ensure that each individual could benefit from the experience.
The peer learning would be offered online as well as continuing through their seminar work. IT helped to achieve these principles as the BBS's own VLE (Blackboard) offers facilities such as discussion forums to be set up either for the whole cohort or within the individual groups which can be allocated as desired. The students were encouraged to use these during their group work. The initial topics for discussion were introduced by me, but the students were allocated to their teams by choosing the topic they were most interested in discussing – using a voting system. This was an attempt to ensure that every learner was able to have an active part in the process. The groups were then set up accordingly but I had access to all the discussion forums and groups so could move the topic on or just view who was participating.

Moving away from the Institution’s VLE to more Web 2.0 technologies is perhaps the next logical step but for this to happen continued exploration and experimentation will be necessary.

CONCLUSION

The learning points identified from this research are:

Students initially expected to receive lecture style sessions alongside a large number of other students but enjoyed the practical activities and would have preferred to have had more.

Students were happy to use technology during their assignment but required clear guidance and tuition prior to using the technology, they were also reassured to know that a contingency plan was in place in case the technology failed.

An induction session for both IT instruction and module/assignment expectations including the role of the students and the lecture is essential. The lecturer needs to demonstrate the application of the technology for research, discussion board and individual reflection opportunities, but gradually step back leaving the students to take ownership of these areas.

Online work continued and extended during seminar, illustrating the importance of keeping up with the self study on a regular basis, but providing opportunities for clarification as required.

Careful choosing and planning which technology would best suit the module content, as well as each lecturer’s own teaching style. Each lecturer has to be comfortable with the technology and its use as they would be for any other traditional teaching method.

Use of the VLE temporarily removes the debate of whether to use the social networking sites ie facebook to encourage discussion forums. Not seen to be encroaching on “their space” (Smyth, 2010b) may be a more comfortable approach for both parties.
REFERENCES


Davies, C and Eynon R (2009) To what extent does the notion of “digital natives” illuminate the technology-related behaviours of young people in the UK?, BERA 2009 Annual Conference, University of Manchester 2-5 September 2009


Smyth, K (2010a) Transformative Online Education for Educators: Cascading Progressive Practice in Teaching, Learning and Technology, Edinburgh Napier University,

Smyth, K (2010b) Our Space or Theirs?, ICT Skills Briefing, Issue 14


This document was added to the Education-line collection on 9 September 2010