Cross cultural comparison: the introduction of new technology with post-graduate students in Hong Kong and in the United Kingdom.

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Abstract: Universities in the United Kingdom are developing collaborations with partners in the East often resulting in academic staff, with little understanding of Eastern cultures, imposing Western designed Virtual Learning Environments (VLEs) and lacking consideration of the learning styles and educational experiences of Eastern students. This paper discusses how the School of Education at Nottingham Trent University (NTU), delivering a Professional Doctorate course collaboratively with a University in Hong Kong has identified and is starting to solve some of the emerging challenges. A literature search revealed no specific guidance to academics in relation to this area of practice although there is literature relating to cultural differences in learning and teaching (Hofstede, 1985), differences in personal theories of learning and constructs for international students (Brown, 2004) and challenges in studying in a second language identified by Maclean and Ransome (2005). Initial engagement with the VLE by Hong Kong students was almost non-existent. Data collected via observations of the use of the VLE by Hong Kong students through metrics available via the VLE's software and interviews with students were carried out and analyzed thematically. Emerging themes include design and presentation of online course materials, use of images, format and layout. This paper addresses how the research impacts on the design of the VLE, the successes and challenges faced by the teaching team and how the changes made to the VLE are engaging the students.

1. Introduction

This paper presents early findings of a longitudinal research project with data being collected over one year, focussing on the engagement of Hong Kong based students enrolled on a course delivered in Hong Kong by Nottingham Trent University (NTU) a post-92 university in the United Kingdom (UK). The purposes of the research are to investigate the use of a Virtual Learning Environment (VLE) which is hosted by NTU. The full project is expected to last for 2 years. The findings presented in this paper represent findings part way through the project.

1.1 Background

VLEs have been used in the UK in schools, colleges and universities since the 1990s providing a 'combination of communications tools and file-sharing applications' (Gillespie et al, 2007, p 3) which are designed as an information space in which interactions occur and students become actors in co-constructing the virtual space (Dillenbourg et al, 2002). The development of VLEs in schools and colleges has been supported by the UK Government through substantial investment into broadband to improve connectivity, band width and access, hardware and software, VLE development and e-learning (Boulton, 2008). To further support the introduction of VLEs the UK Government introduced a requirement that by 2008 all schools would have a VLE in place. Becta, a Government funded agency with a remit to support the development of ICT in schools and colleges in the UK, provided information, support and advice on how to use VLEs in learning and teaching. Schools have thus been using VLEs for at least 5 years, many for much longer. The standard of VLE use in schools is varied and since a change in Government the requirement for all schools to have a VLE in place has been removed. However, VLEs have proven they provide an excellent resource for schools for teacher: pupil, pupil: pupil, (Coppola et al, 2002) and parent: school communications (Boulton, 2008). However, there are a plethora of VLEs that schools in the UK have chosen to use, some using free software such as Moodle which they support in-house, and others choosing to purchase a VLE provider such as Fronter and Frog. Schools and colleges have invested differently in terms of staff training for teachers in using VLEs with some schools making the use of a VLE in learning and teaching compulsory, while others encourage the use of a VLE, but recognise that not all departments make use of this resource. VLEs in UK schools have provided an opportunity for a personalised approach to learning (Barajas and Owen, 2000) and developing technologies have resulted in high expectations of students. Therefore UK students arriving at university have generally had some form of experience of a VLE.

The use of VLEs in UK universities has changed the way learning and teaching takes place with an increased use of a range of technologies such as blogs, wikis, twitter, and eportfolios (Hardy and Clughen, 2012). These changes are resulting in new and emerging pedagogy and changes in the way pre-service teachers are prepared for teaching in UK schools and colleges. Standards for new lecturers, set out by the Higher Education Academy (UK) in their Professional Standards Framework were updated in 2011 to place a greater emphasis on the use of digital technologies and digital literacy skills in UK universities. As universities in the UK compete for students, employability is seen as high on the agenda of prospective students, with digital literacy skills listed by many universities as core employability attributes which will be developed during university courses.

At NTU there is a clear expectation that all students will use the VLE, which was installed 7 years ago, and there is an expectation by students to access and use a VLE. Considerable investment has been made by NTU to provide an appropriate VLE for students in terms of infrastructure, access, staff training, administration and technical support. Once enrolled on a course NTU students are immediately directed to access the VLE where they are able to access information related to their course, modules, student support services, on-line student communities, discussion boards, their own eportfolio, blogs and elearning guides to support use of various core software such as Word and PowerPoint.

NTU have undertaken various research projects to identify benchmarks for staff and students to follow. The expectation of NTU for courses to use the VLE is set out through its 'Minimum Standards' policy which provides guidance on the minimum expectation that each course must use the VLE, have a course 'learning room' and module 'learning room(s)' for each module. The policy sets out clear expectations for each learning room such as welcome message from course leader, course handbook, assessment and feedback information, reading/resource list and materials for taught sessions (Figure 1).

'Programme minimum usage:

Welcome message from Programme Leader

Programme handbook, assessment scheme, module option choices (where appropriate)

Programme news

Programme Representatives and Programme Committee meetings

Module Minimum Usage:

Welcome message from Module Leader

Module handbook, guidance on assessment and feedback mode;

Module news

Reading and/or resource list

Normally, materials or links to resources in support of class work and directed learning (e.g. details of tasks, copies of lecture/seminar resources, hand-outs, and links to resources such as video clips).'

Fig. 1: Excerpt from NTU Minimum Usage of VLE Policy

The VLE is thus embedded into the course management infrastructure with minimum expectations for students at NTU. While the VLE has the potential to be used mainly as a process of electronically disseminating information to students there are features which enable increasing blended learning and elearning together with opportunities to build communities of practice within and across courses such as using discussion boards, eportfolios and blogs. The engendering of community is seen as increasingly important in Higher Education (HE) (Wenger, 2005; Abbott et al, 2005; Boulton and Hramiak, 2012).

It is with this background and context of expectations and use of VLEs in the UK that NTU's VLE was introduced into Hong Kong for students enrolled on an NTU-based course taught by NTU staff and delivered in Hong Kong through a collaborative agreement. The course is the Professional Doctorate in Education, a 3 year part-time course for students with a Masters level qualification in English, working within a professional context. The aims of the course are to:

- explore both the complex relationships between knowledge, theory and practice, and also the intricate nexus of understanding the world and changing it
- develop students' ability to design and implement a research project at the boundaries of knowledge of their professional and educational fields
- provide students with an opportunity to develop their judgment, foresight and problem analysis by applying theoretical and philosophical skills to the research material derived from their investigations.

In addition it provides students with the opportunity to:

- develop as both reflective and reflexive practitioners who have the intellectual and personal adaptability to be able to deal with the complexities of organisational change and ambiguity
- develop communication skills which enable participants to communicate effectively with both academics and practitioners from the world of education and the communities in which people live
- act as mediators between the constituencies involved.

The course is taught in Hong Kong over 4 weekends each year with supervisory support throughout the academic year and additional support through the VLE. The VLE learning rooms are for all Professional Doctorate students, that is. those in the UK and those in Hong Kong; there is no differentiation of access or materials.

Course delivery in Hong Kong began in 2011 and now has 3 cohorts (n=32). The VLE has been used since the outset of the course but with little success in Hong Kong; success being measured at the very basic level of whether students have accessed the VLE. A recent visit to Hong Kong with the intention of engaging the students more thoroughly in using the VLE revealed disengagement, a research project was thus established to develop evidence-informed practice that will encourage Hong Kong students to engage more effectively with the material to enable a greater use of online learning, a deeper level of learning and a faster pace of progression. Research into why Hong Kong students are not accessing and using the VLE was therefore deemed as essential by the course team to identify potential developments to support Hong Kong students in engaging with the VLE, identifying any potential barriers and in identifying cultural differences, if any.

2. Relevant Studies

A literature search revealed no specific guidance to academics in relation to this area of practice in terms of differences in culture. However, researchers have acknowledged differences between Western and Eastern usages in terms of the layout of the graphical interface, images, symbols, colour and sound (Stoney and Wilde, 1998). Hofstede (1985) opened the debate and stimulated dialogue about cultural differences and the need for culture to be acknowledged in teaching and learning. Chen et al (1999) developed this further relating the debate to the design of technology-enhanced learning systems, stating that the development of knowledge needs to reflect the cultural and social framework of the learner. Carroll and Ryan (2005) assert that there is a need to be explicit about purpose and structure of activities and assessment; while this assertion is based on classroom focused research it impacts on online learning. Brown (2004) drawing on Gestalt cognitive theory asserts that the personal theories of learning and constructs of international students differs widely from the Western norm, which can hamper learning. Maclean and Ransome (2005) identify studying in a second language, adjusting to an unfamiliar educational context and perceptions of workload can impede international students.

There are many drivers to using new technologies in Higher Education including those set out above. Laurilland (2008, p 1) states 'never before has there been such a clear link between the needs and requirements of education, and the capability of technology to meet them. It is time we moved education beyond the brink of being transformed, to let it become what it wants to be'. However, there are arguments against using new technologies in learning and teaching. For example Kersh, Pachler and Daly (2009, p 2) state that 'digital technologies alone do not facilitate learning. To be meaningful, e-learning needs to be grounded in a pedagogical or educational approach'; Hart states 'we risk therefore becoming rich in information but poor in knowledge' (in Ramsden, 2003, p172); and Ramsden (2003) explores concerns that e-learning is an easier and cheaper form of information-transmission. Indeed, there are many challenges facing Higher Education as exposed by Jisc (2009) 'Effective practice in a technology-rich context comprises a skilful combination of long-established and more innovative strategies in order to engage and empower learners and make learning more accessible, participative and rich' and Beetham and Sharpe (2007, p 3) state Higher Education 'should locate the new technologies within proven practices and models of teaching'. Research by Jisc (2009, p 4) into students' views of technology

development in Higher Education in the UK show that 'Using technologies in all aspects of their studies, today's digital learners rarely see e-learning as a separate or special activity. They are adept at blending personal and institutionally owned technologies with traditional approaches to learning in ways that are unique to them.'

Thus there are both advantages and disadvantages, identified in the literature, for using new technologies in learning and teaching and challenges identified in the literature in using the same technology with eastern and western students.

3. Methods

As stated above this is an interim report on an evaluative longitudinal research project (Bassey, 1999), that is expected to extend over 2 years. The context for the research is set out in the above section. The students involved in the research are all enrolled on the Professional Doctorate: Education delivered by NTU academics in Hong Kong. Students attend weekend workshops in Hong Kong, supported by supervisors based in the UK with access to NTUs VLE. Students are aged 25 to 68 and comprise 19 males and 13 females. At the start of the project there were 2 cohorts of students enrolled in the course: Cohort 1, started in January 2012 with 13 students; Cohort 2, September 2012 with 11 students. Cohort 3 was enrolled soon after the start of the research in September 2013 with 8 students.

At the start of the research the students had access to NTUs VLE as soon an enrolment was completed and were directed at completion of enrolment to log into the VLE to locate course documentation etc. The course 'learning room' was for both UK-based and Hong Kong-based students. There was one 'learning room' combining both the course learning room and module learning rooms which contained folders for each of the modules with materials used in the taught workshops. Initial data was gathered from the existing learning room which provides analytics of access by students.

BERA's ethical guidelines have been followed throughout this research project with consent from students and ethical clearance from NTU for the research to be undertaken. All students were invited to take part in the research and were able to withdraw at any point. Focus group interviews were carried out at the start of the research with cohorts 1 and 2 to identify how students were using the VLE, their overall experience, and how the VLE could be developed; cohort 3 had not enrolled at the start of the research. All students were asked to complete a questionnaire where questions were asked relating to their prior experience of using a VLE, whether they were shown how to use the VLE as part of their induction, their usage of the VLE during the course, potential developments of the VLE that would engage them in using the VLE more frequently and any barriers to using the VLE. The questionnaire included both open and closed questions allowing for further information in the form of narrative. As stated earlier this is an interim report. Further data collection will include focus group interviews and an analysis of the VLE data to identify whether, as developments are made, students do engage more with the VLE.

4. Findings and discussion

This section sets out the initial findings from this longitudinal study. Initial data was collected via an on-line questionnaire to gain baseline data. This was emailed out to the whole group with an explanation of the research and asking students to complete the questions. Of the 27 students in Hong Kong, 17 completed the questionnaire. Of these 17 eleven of the group had used a VLE previously while at university; none indicated they had used a VLE in school. Of these eleven 'previous users' five had used the VLE rarely, four had used a VLE weekly and two had used a VLE daily. These previous users had mainly used the VLE for downloading documents as part of a course, with one student submitting work through a VLE and one using the VLE's email facility.

The initial focus group interviews with cohorts 1 and 2 indicated that the students were not using NTUs VLE. This was supported by data analysis of access to the VLE by the Hong Kong students which indicated only nine students had accessed the VLE in that academic year (2012-13). Figure 1 shows these students, coded as students A-I. This is a significantly low number of accesses for the students and indicates lack of engagement with the VLE which supports the purpose of this research.

Student	Number of times accessed VLE.	Number of topics visited	Time spent
A	17	32	9 hr 38 mins
B	1	0	0

C	6	1	40 mins
D	9	0	0 min
E	6	5	3 hr 32 mins
F	2	2	1 min
G	6	5	14 mins
H	6	3	3 mins
I	5	4	1 hr 9 mins

Fig. 2: Analytics showing access to NTU's VLE at commencement of the project.

The focus group interviews supported the emerging data that students in Hong Kong had little or no prior experience of using a VLE; only those students who had studied for a Masters level course at a UK university had used a VLE previously and then mainly infrequently. Data from these focus group interviews indicated that the students were able to access the VLE, all having access either at home or work to fast internet connectivity. These interviews also indicated and that 100% of the students felt they needed to be shown how to use the VLE as part of the induction. Those that had accessed the VLE were unsure where to go to access course documents and information and said they would value time, with support from a tutor, to learn how to access the VLE and actively use the VLE. This indicates the importance of an induction on how to use the VLE is important. An interview with the previous Course Leader indicated an assumption that as in the UK students would know how to use a VLE. This indicates an important area of cultural difference between western and eastern students and the expectations of academics.

Aspects of differences between western and eastern students emerging from the research are in use of images, format and layout which reflects findings from the literature. The data collected indicates that 12% of students find the format difficult; 12% find the layout difficult; and only 6% would prefer different images. These are fairly low statistics, but non-the-less indicates changes need to be made for transnational students. The most significant statistic related to the way materials were presented; 47% stated the found the overall presentation of materials difficult to understand. Of the 12% who commented on the format one student (Student 2) stated 'I think that the [VLE's] platform format could be revamped so that it is easier to find documents. Right now, I don't find the organizational structure intuitive, so I tend to spend a lot of time looking around to try to find what has been added recently and if it is relevant to me' which tends to indicate it is the presentation of the materials rather than the format which they are finding difficult. Students also commented on aspects of the overall VLE which are beyond the scope of this project to develop, such as 'one click' (Student 16) from logging on to get to email, and 'not having to change your password every 90 days' (Student 15), although these have been reported back to the VLE team.

Changes that have been made as a result of this initial research which indicate an increased access to the VLE. A major change has been in creating a separate Course Learning Room with course handbook information, and separate learning rooms for the different Module learning rooms, with each Module now representing a cluster of taught Workshops leading to set Documents which students submit for summative assessment during the course. For example Module 1 includes the Workshop materials for Workshop 1 leading to Document 1; Module 2 includes the Workshops materials for Workshops 2i and 2ii leading to Document 2. The Module Learning rooms have been titled to reflect each of the six Documents students complete as part of the course. Figure 3 shows the different learning rooms:

2013-14 Flex Prog 1

SSRM50100: Intro: Project ID and Planning 201314 Flex Prog 1

SSRM50110: Epistemology & Identity 201314 Flex Prog 1

SSRM50120: Designing Research 1 201314 Flex Prog 1

SSRM50130: Designing Research 2 201314 Flex Prog 1

SSRM50140: The Thesis 201314 Flex Prog 1

SSRM50150: Critical Reflect'n & Reflex'ty 201314 Flex Prog 1

Fig. 3: Screenshot from the VLE's: Module 'Learning Rooms'.

The second major change was to create a separate and 'private' area in each learning room associated with the Professional Doctorate that only the Hong Kong students could view and access. This was viewed by cohort 1 and 2 students as being significant and highly praised; they now knew where to access their content, and tutors were able to put messages up specifically for the Hong Kong cohorts. The student representative for cohorts 1 and 2 reported to the Course Committee that the students were 'very impressed' by this development.

Both cohorts 1 and 2 received an additional workshop as a response to the initial focus group interviews where they were shown how to access the VLE, and given hands on opportunity to spend some time in using the VLE while in a computer workshop which enabled each student to work individually on a computer. Evaluations from this workshop indicated that 100% of students were able to access the VLE and would in future be using the VLE regularly, i.e. weekly to access course materials.

The Induction for the course has also been developed to incorporate time in a computer room to show students how to access and use the VLE, with time for students to spend familiarizing themselves with the VLE and resources available. Significant development work has also led to students being able to access online resources such as eBooks and journal articles from the VLE. Cohort 3 were the first cohort to go through this developed Induction; analytic indicate this group are accessing the VLE more than cohorts 1 and 2.

Additional developments have involved the Course Leader and tutors in ensuring they regularly update materials in the VLE to encourage students to access the Module learning rooms. Rather than emailing Workshop materials these are being uploaded to the VLE which is saving tutors time and again encouraging students to engage with the VLE.

Prior to this research project assignments had to be posted in hard copy to NTU for assessment. As the VLE offers a 'Dropbox' facility whereby students can upload their Document assignments and receive a dated receipt for submission this is now being utilized. An automatic message alerts the Course Administrator that new Document assignments have been submitted to ensure timely feedback. Tutors can then download and mark the assignment online and upload feedback which again is dated. While this is still in the early stages of adoption both students and tutors have found this to be a positive development, reducing feedback turnaround time and allowing more careful tracking of assignments.

Throughout the project Salmon's (2000) model for on-line learning has provided a framework for developing the VLE for the Hong Kong students. Salmon indicates that the first stage in engaging students with technologies is in ensuring students can access and use the system; this was a failure in the initial usage of the VLE in Hong Kong and maybe accountable for lack of usage by the students. This has now been resolved by building opportunity to access and use the VLE into the induction programme. As stated above Cohort 3, who completed the redesigned induction have all accessed the VLE and have downloaded at least one document successfully. In stage 2 of Salmon's model, 'Online Socialization', the development of a 'private' area for the Hong Kong students which includes a Welcome message from the team that delivers the workshops in Hong Kong is helping to develop a community. Plans for the future include regular news items for the students to encourage them to engage with the VLE in between Workshops and the development of a discussion board for the students to utilise to provide peer support. At this stage in the research stage 3 of Salmon's model, 'Information Exchange' is still developing with planned activities about to be activated. This will form the next part of the research project. It is intended that future developments will also involve stages 4, 'Knowledge Construction' and stage 5, 'Development', of Salmon's model with developments including opportunity for student to co-construct knowledge, develop an online community of practice (Boulton and Hramiak, 2012), share literature searches, and develop their critical reflective practice. Whether the VLE's features will be used for stages 4 and 5 or whether a link will be made to the VLE to take students outside the VLE to more appropriate technologies such as an online community blog or wiki will form the next stage in the project following advice from Beetham and Sharpe (2007, 3) to locate 'technologies within proven practices and models of teaching' and research by Jisc (2009) which indicates that students are able to blend technologies.

5. Conclusion

As stated from the outset this paper reports interim findings of a longitudinal study. The project focusses on identifying the needs of Hong Kong students enrolled on a UK-based course with different expectations and needs in using a VLE to support their learning, compared to students in the UK. The Hong Kong students prior to the research showed ddisengagement, not in the notion of using the VLE for learning but in the unconsciously ethno-centric bias of the design of course materials and use of the development of the VLE by academic staff. Ongoing research with the Hong Kong students is resulting in significant changes to the VLE and a higher level of engagement.

Early results indicate that the new cohort of students who are benefitting from the outcomes of the research and developments to the VLE, as well as a process of induction to develop their confidence in using the VLE, are engaging at a higher level than previous cohorts. Further research will focus on design and presentation of online

course materials, a focus on the use of images, format and layout and identifying any further barriers to using the VLE.

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