

Using Virtual Learning Environments: Lecturers' Conceptions of Teaching and the Move to Student-Centred Learning.

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Abstract

This paper reports on doctoral research investigating whether Virtual Learning Environments (VLEs) are being used to facilitate student-centred learning in UK Higher Education (HE). The focus is on lecturers (HE teachers) teaching in a face-to-face context. It is claimed that the use of Web or Internet-based technology can facilitate the creation of a student-centred learning environment [1] and the adoption of a student-centred method of teaching [2]. It is argued that student-centred learning and learning environments designed with reference to constructivist theories of learning will produce in students the critical and cognitive skills that Higher Education aims to develop [3], [4], [5]. However, there are barriers that prevent the integration of technology into teaching [6] and elements in the teaching environment [7] that affect whether a student-centred approach to teaching is adopted. The conception of teaching held by the lecturer [8] is one such element.

1: Introduction

The aim of this research is to examine whether lecturers are using Virtual Learning Environments (VLEs) to support student-centred methods. VLE is the term used to describe the package of integrated software (content management and presentation, synchronous and asynchronous communication tools) that make use of Web or Internet-based technologies and are used to put courses online [9]. Examples are commercial packages such as WebCT, Blackboard, Learning Space and Learnwise. Some VLEs are based on specific pedagogic models, for example COSE [10], which emphasise the importance of communication and collaboration tools and encourage a move away from the uploading of large amounts of content and electronic page turning which is not considered the best use of VLEs.

The research questions are:

- Can VLEs support student-centred learning and how does the functionality of the system affect lecturers?
- What are the motivating factors for lecturer use of VLEs and what prevents them being used?
- How are lecturers using VLEs, what methods are they using, and how does this fit into their overall pedagogy?

2: Approaches to teaching and technology use

It is widely argued that student-centred teaching approaches encourage students to adopt higher quality approaches to learning – what Biggs and Moore [11] among others call a deep approach to learning – and aid the development of critical abilities. It is argued that student-centred learning and learning environments designed with reference to constructivist theories of learning will produce in students the critical and cognitive skills that Higher Education aims to develop [3], [4], [5]. However, there may be pressures on lecturers to use particular approaches in their teaching. Trigwell and Prosser [7] found that lecturers who felt that they had more control over their teaching (what is taught and how) were more likely to adopt student-focused approaches. These approaches were affected detrimentally if the class size was thought to be too large, student diversity too great and workload too heavy.

Lecturers' beliefs about teaching and learning and how to create the most effective learning environments are fundamental to improving student learning. Research has shown that lecturers' conceptions of teaching correlate with teaching approaches that in turn correlate with student learning approaches and learning outcomes (see [8] for an overview and [12]). Murray and MacDonald [13] argue that there is a disjunction between lecturers' conceptions of teaching and their claimed educational practice; Prosser and Trigwell [14] developed the Approaches to Teaching Inventory (ATI) as a way of overcoming this.

Elements in the institutional environment, such as access to equipment, training and support, may also affect lecturer usage of the Web and Internet-based technology. Barnard writes about an obstacle course of barriers that have to be overcome if teachers are to move “from being non-users of technology to being fluent users who could integrate technology into their teaching” [6], pg. 352). These include anxiety, unfamiliarity with the technology, resourcing, perceived usefulness, personal philosophy, the influence of colleagues and classroom dynamics [6].

3: The pilot study

A semi-structured interview was used to collect data from twelve lecturers at four different UK universities.

The aim was to find out what was actually happening in Higher Education (as distinct from what the literature indicates may be happening): Were lecturers using Web and Internet-based technology? What sort of technology and how? Was pedagogy influencing the use of the technology? Were lecturers aware of their pedagogy? Consideration was given to the possibility that some lecturers may be more comfortable with the use of Web and Internet-based technology and that some lecturers may be more able to explain and justify their pedagogy. For this reason education lecturers and those teaching computer science were interviewed. The third category of lecturer interviewed was those in social science or humanities, because they had no obvious reason to feel comfortable with the technology or a reason to be familiar with pedagogic terms. The findings indicated that:

- The use of VLEs is not widespread, even within those universities that support use. The post-1992 universities are more likely to have an institutionally supported VLE and have a strategy that encourages use.
- Use was restricted by access issues, student and lecturer IT literacy, student expectations and colleague use, time available to create resources and to become familiar with technology.
- The 'electronic filing cabinet' was thought to be valuable, it was a time saver for lecturers and convenient for students.
- Use of e-mail was widespread, discussion lists were used in some cases, but there was some resistance from students and lecturers were unsure; 'chat' was only used by one lecturer
- The technology was used to support group work, reflection, contact with the lecturer, sharing of work and engagement with materials and content outside class time.
- Teaching methods adopted by lecturers were dependent on class size and influenced by the way they had been taught, observing others and any training they had received.

4: Designing the main study

The pilot study indicated that the following issues should be borne in mind when designing the main study:

- Asking about teaching methods did not help identify a lecturer's teaching model, the same method can mean different things to different people: use of the ATI [14] may give a better indication of their intentions and strategies.
- Talk about technology use was often confused with talk about general teaching: asking a lecturer to focus on specific examples and the reason for technology use may clarify this.

- Trying to compare use across discipline areas is difficult; there are differences that impact on technology use and teaching method used. Choosing a particular discipline area may help in this case.

The interview schedule was revised in the light of these issues and individual interviews were conducted with thirty-two lecturers across ten universities. All lecturers were also asked to complete the ATI. The data collected is being analysed at the time of writing.

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