Integrating e-learning technologies and practices within university teaching: challenges and perspectives

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Abstract: This paper examines the challenges and perspectives University teaching is facing in the context of technology innovations. It argues that University teaching by including e-learning potentials can be facilitating and broadening participation, but points out that pedagogy must be considered.

Key-Words: - University teaching, Pedagogy, e-learning, ICT teaching

1 Introduction

A good deal of the work on the future of teaching and learning is written from a technological stance, partially because technological developments are often seen as the most obvious, most visible manifestations of change in this context. There are, for example, numerous publications, which look at 'innovations' in information and communications technology (ICT) and at what these mean for the roles of teacher and learner. There are also discussions concerning the extent of technological change, addressing the issue of whether and how ICT and e-learning will 'revolutionise' teaching and learning, or whether it is simply just one tool amongst many within schools and classrooms.

University teaching could be no exception to the above and has been confronted with new challenges that are to reshape what University teaching and learning are all about. Specifically in this paper we will examine what these challenges and perspectives for University teaching are.

2. Traditional Pedagogic Forms in Universities

Bob Cowen (7) describes the forms of pedagogy in University teaching: the lecture, the seminar, the tutorial, and the evaluative form, which is embedded in them.

Someone gives *a lecture*; other people go to it. In the lecture, the display of text is the first formal act (after the legitimation by the chairperson of why this lecturer is giving this lecture). The display of text is normally verbal and the display is also physical: movement, clothing, voice tone, may be used to punctuate what is said. Of course, technological support (microphones, overhead projectors, Powerpoint and so on) may be used to carry and illustrate the word. The *tutorial* is typically diadic, occasionally triadic. It can take place in a small intimate space such as a university office, or in a public space in which intimacy can be created,

a café, an *agora*. Its time is typically, though not always, sharply finite. The tutorial is normally without ritual. The display moment of the tutorial does not initially belong to the tutor but to the text. The text is offered by a less competent inferior – these days, a professionally-defined inferior, such as a student. The apparent initiative of the inferior in producing the text is a mandated initiative. The text may indeed be delivered before the event, as a written text, or delivered during the event as a verbal statement

Someone leads a *seminar*; other persons participate in it, and the politics of the educational space, which is the seminar begin in this division of power. There are participants, but typically there is an owner of the Seminar. That is, someone who convenes the seminar series, who leads it week by week or day by day, and who – over time - makes a series of seminars coherent as a disciplinary discourse. Seminars, typically, are sequential events. However the seminar begins in co-ownership. There is the seminar leader - the owner of the seminar – but for the seminar to function the seminar space is lent to the presenter. For how long and on what terms produce the subsequent politics of pedagogic performance.

3. E-learning and University Teaching

E-learning is a generic term covering a wide set of ICT technology-based applications and processes, including computer-based learning, Web-based learning, virtual classrooms, and digital collaboration and networking. It includes the delivery of content via Internet, Intranet, Extranet, satellite broadcast, audio-video tape, interactive TV and CD-ROM (Kaplan-Leiserson's online glossary). Therefore, on-line learning (or Web-based learning) constitutes just a sub-set of e-learning and describes learning via Internet, Intranet, Extranet. Yet, e-learning is defined more narrowly than distance learning, which would include text-based learning and courses conducted via written correspondence (2). One of the strongest arguments for adopting a e-learning approach springs from the idea that as learners we create ideas before we test or evaluate them: according to E.H. Gombrich, learners 'make and match'. A learner may grasp a problem and suggest a solution. The solution may or may not be a realist one. ICT improves access to information and ideas and is becoming an important learning resource, which is potentially accessible to most people in the western world. It is a huge source ideas, of varying quality. For the learner to effectively use this resource they need to become more autonomous in their learning. In one sense, e-learning challenges teachers and learners to adopt a new pedagogy, one less dependent on traditional approaches involving the transmission of knowledge from teachers to learner. This new pedagogy is one in which the learner has far more independence and control(6).

The possible benefits of e-learning for University teaching are:

- Wider access for non-traditional entrants
- On-Line Portfolio for long-term record of achievement
- Work-based remote study.
- Flexible curriculum structure e.g. personal access to different subject fields.
- Promoting Collaboration via discussion, chat, file upload features.
- Develop student IT capabilities within learning process.
- New markets, International Market Provides a knowledge base or repository to facilitate study
- Ubiquitous' access to study resources via institutional, home, work, library, third-party access; possibility for mobile access via PDA (Portable Digital Assistant).
- System Integration -seamless access to range of online services via 'single sign on' or common institutional login. Closer integration with learning support / library systems. Automated course administration may be possible when integrated with student records system.
- Improved interaction - online assessment with automatic scoring and reporting, course-work submission, tracking student participation, improved integration of email features for

communication, online 'whiteboard' and chat to facilitate distance learning(1).

There can be drawbacks or deficiencies in e-learning and all these are to be taken under consideration when planning to insert e-learning in University courses. Specifically as for the student(12):

- Lack of personal Internet connection may restrict access.
- Greater reliance on self-discipline of student, e.g. self-directed study via VLE.
- Reduced face-to-face peer contact, possible impact on peer-support, collaboration, problem solving
- Reduced face-to-face tutor contact, possibly reduced student-tutor relationship.
- Technical / User Support queries difficult to resolve in low contact context.
- Accessibility / Usability - Is there any unusual interface design or operations requiring specialist training? Is the system tested for accessibility standards (WCAG)? And Web standards (e.g. XHTML 1.0). Does the system function in a range of browsers/ assistive technology.
- Off-loading of printing costs on the student, an easy alternative to handouts?

E-learning can be proven beneficial for University learning(4). For example, asynchronous staff-student and student-student communication by email can improve understanding if all use it effectively (especially reading their Inbox regularly). However teachers' expectations of a regular pattern of "office hours" may not be congruent with expectation of students of "support at any time". In any case, a successful online learning community has many of the same characteristics as a 'real' community. It offers individual support to its members, so that they can feel safe to communicate openly, which in turn allows them to develop the shared vision that they need in order to learn together(14).

An influential approach to teaching and learning in Higher Education by e-learning has been the forms of Open Universities. However, what can be seen in the Open University is a considerable division of academic and pedagogic labour. Open University began a separation of the processes of course construction (the definition of good knowledge), the organisation of the delivery of instructional charisma in the televised lecture, the local-level and rather variegated delivery of extirpation of error in tutorials, and the scattering of seminar talk in the summers (7).

Division of academic labour leads to a centrifuge of the pedagogic centre. Learning specific knowledge displaces teaching; or more precisely, the requirement to learn is reinforced as the crucial professional characteristic of the student, and the requirement to teach is routinised in a clear delivery system. The evaluation system is also routinised: it works literally and metaphorically at a distance. There is little question here of assessing the attributes of a person (curiosity, brilliance, potential). The evaluation principle was rather: what, on the evidence of her essays, has she learned about the field of study? This leads to a misguiding sense of education, training would be a more accurate word to what really happens until now(7).

Of course, research in e-learning is now starting to provide a systematic critique of what might be called the first phase in the development of e-learning. Up to now, much of the activity has been to get it up and running, to establish the three or four VLE platforms, and to deliver the goods. That has been done. The second phase will be to develop the next generation of platforms, and provide more user-friendly environments for learning, as opposed to just ensuring the delivery of courses. The utility of this next stage is yet to be proven(17).

4. Pedagogical issues for University teachers

University teachers, of course, are well acquainted with traditional pedagogic forms. But e-learning forms are very demanding as well(16,15). Almost anyone who has taught online would argue that the demands on online tutors are different from those on face-to-face tutors, although the general issues and situations

with which they must deal are, in essence, the same. The online tutor must manage a course, guide students throughout the learning experience, motivate them, interact with them, assess them and deal with any conflicts or difficulties. The differences in tutor role result from the characteristics identified above: the absence of non-verbal clues, the use of text as the main means of communications, and the constraints imposed by technology. However, any list of roles that can be produced should only be regarded as a general framework.

E-learning presents a challenge to the roles and responsibilities of academics and "support" professionals. Apart from the expected "quality processes" many traditional course development is done in an ill-formed and often quite ad-hoc way. Involvement of support professionals is very rarely integrated in any real way into the course design/development process(8). E-learning, by its very nature, demands considerably much planning. However, there is little evidence that pedagogy is much considered in this process, with far too many staff seeking to model traditional practice onto e-delivery(10). Support, at all levels, is often either overlooked or not effectively used. Indeed, it is very often the case that developers have not thought through the reason why they are going to use E-Learning in the first place. (Sometimes the reason for doing it is solely that funding exists!). Overall, the essential amateurism of HE course design and development is thrown into sharp relief by e-learning(17).

Whilst the ultimate potential of e- learning is unlikely to be realised until the standards and technologies are in place to facilitate their interoperation with each other and wider organisational and information systems, the view is that the successful deployment depends first and foremost on addressing the pedagogic issues associated with effective learning and ultimately on the overall quality of course design and learner support. (6)

5. Conclusion

There is a need for institutions to address within their curriculum the developmental needs of both traditional learners and 'non-traditional learners' and most institutions have taken steps in this direction. Provision for this can be "separate" – where provision is specifically targeted at non-traditional learners or "integrated" where provision is aimed at developing requisite capabilities in all learners (9). In this paper we argued for the integrated approach as the best means of meeting both the widening participation and "skills" agendas.

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