E – LEARNING A CATELIST ROLE ON HIGHER EDUCATION

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Abstract

The Internet is a technological development that has the potential to change not only the way society retains and accesses knowledge but also to transform and restructure traditional models of higher education, particularly the delivery and interaction in and with course materials and associated resources. Utilizing the Internet to deliver e-Learning initiatives has created expectations both in the business market and in higher education institutions. Indeed, e-Learning has enabled universities to expand on their current geographical reach, to capitalize on new prospective students and to establish themselves as global educational providers. This paper examines the issues surrounding the implementation of e-Learning into higher education, including the structure and delivery of higher education, the implications to both students and lecturers and the global impact on society.

Introduction

E-Learning is construed in a variety of contexts, such as distance learning, online learning and networked learning (Wilson 2001). In the context of this paper all of these instances will be considered to describe learning that utilizes information communications technology (ICT) to promote educational interaction between students, lecturers and learning communities (Holley 2002). Volery (2000) argues that the fast expansion of the Internet and related technological advancements, in conjunction with limited budgets and social demands for improved access to higher education, has produced a substantial incentive for universities to introduce e-Learning courses. Volery (2000) continues that if universities do not embrace e-Learning technology that is readily available, they will be left behind in the pursuit for globalization. Ribiero (2002) argues that if universities are to maximize the potential of e-Learning as a means of delivering higher education, they must be fully aware of the critical success factors concerned with introducing online models of education. Many commentators describe the relative benefits of E-Learning in higher education; however, there are ramifications for unprepared, technology focused institutions, when trying to implement distance learning courses. O'Hearn (2000) contends

that university structures are rigid and unproven, regarding the incorporation of technological advancements. Holley (2000) states that e-Learning is difficult to implement without the full cooperation and support of lecturers, as the degree of interaction between lecturers and students is still predominant in e-Learning environments (Volery 2000). Finally, are traditional universities able to compete with other independent education providers in relation to social demands for 'life long learning' and globalised education services? (O'Hearn 2000).

The Role of Teachers

The dynamic nature of the IT industry in conjunction with evolving e-Learning technologies has created a tension for lecturers in higher education. E-Learning initiatives have reportedly created new educational issues for lecturers, such as changing work patterns and in some case the reluctant integration of technology. Serwatka (2002) argues that sometimes student success can be achieved simply by preventing student withdrawals from e-Learning programmes. The teaching techniques used by lecturers in traditional courses may also have to be reviewed and modified, as they do not always prove effective or necessarily transferable in e-Learning environments (Serwatka 2002). Lecturers in networked learning environments modify their courses as they go along, meaning the longer a course is taught in a particular format the more effective it is (Volery 2000). Many suggest that rather than changing the role of the lecturer, it will gradually disappear completely with the rise of improved e-Learning technologies and methodologies. At Carnegie Mellon University (CMU) in America they exercise the concept of a 'wired campus', in which all students learn in a number of disciplines via e-Learning. At CMU the traditional lecturer is considered a relic of the past that should be replaced by electronic tutors. Scott (2000) explains how in the future these electronic tutors at CMU will act as virtual teachers, if students make a mistake the tutor will be informed automatically and will offer helpful hints. Scott (2000) argues that virtual tutors will out perform traditional face to face techniques because in traditional lectures vital information flows past students, whereas the virtual tutor can wait until a student demonstrates a clear understanding of the information or knowledge repository. Rigid information management mechanisms which incorporate tutor invention and involvement must be facilitated in a variety of ways, as they would within the contexts of class based activity. Volery (2000) maintains that technical expertise on its own is not of great value unless lecturers conceive effective ways to utilise it. Lecturers will always play a key role in the effective delivery of e-Learning initiatives, as it is the lecturer not the technology that facilitates the students learning experience. Wilson (2001) suggests that three characteristics of the lecturer will control the degree of learning; attitude towards technology, teaching style and the control of

technology. In support of this view Holley (2002) concludes that students will experience a more positive learning experience if guided by a lecturer who retains a positive attitude towards traditional learning whilst promoting e-Learning methods. The accepted acronym for such exposure being called 'Blended Learning'. Blended learning is an important building block of the new schoolhouse that offers students both flexibility and convenience, important characteristics for working adults who decide to pursue postsecondary degrees. Blended learning is a hybrid of traditional face to face and online learning so that instruction occurs both in the classroom and online, and where the online component becomes a natural extension of traditional classroom learning (Colis and Moonen 2001).

Enhanced Teaching Tools

The future delivery of education is envisaged through e-Learning technology providing lecturers with superior teaching tools. Volery (2000) argues that online methods facilitate more effective education and offer significant advantages over traditional teaching methods. This can be via full blown technological implementation or limited technology based environments such as bulletin boards, virtual lectures and e-Libraries. McClelland (2001) contends that in e-Learning environments lecturers can offer constant educational support, as students are able to communicate with classmates and lecturers, visit web sites and view course material regardless of their time and location. To maximize the potential of e-Learning teaching tools Holley (2000) advocates two methods to modify the learning process. Firstly, educational re-engineering that will revolutionise classroom practices and secondly educational fortification that will improve the learning courseware through technology. Despite the apparent advantages of e-Learning teaching tools there appear to be certain practical problems with regard to utilising these techniques in educational learning environments. Teare (2000) explains that initially the process of teaching via e-Learning may demonstrate features of educational enrichment but in reality e-Learning methods prove highly problematic. Teare's (2000) studies suggested that some students who participated in online learning courses found the delivery of course content impractical and frustrating due to technological failures. These finding's imply that the problems with e-Learning initiatives are not the value of the delivery methods but the reliability of the technology supporting them. Volery (2000) identified that university students who participated in Virtual lectures found the experience rewarding and rated them as a valuable learning tool. However, nearly two thirds of the students in the class did not participate fully because of technical problems i.e. frustrations in trying to connect and utilise the networked systems. It seems that the teaching tools associated with e-Learning may have the potential to equip lecturers in higher education with flexible channels and a model for the delivery of courses. Web based learning allows lecturers to disseminate up to

date course content in relatively no time at all and students can complete courses just-in-time, giving them the opportunity to apply knowledge in contemporary situations (Teare 2000). e - Learning courses can be structured and aligned with the requirements of today's workforce (Volery 2000). Also, teaching methods such as virtual lectures, sustain group interaction whilst broadening the flexibility of communication between students, indicating that e-Learning teaching methods enhance student interaction and offer a flexible alternative to traditional time and place constraints (Holley 2000). However, many authors debate e-Learning programmes regarding the reliability of technology versus the apparent advantages of learning delivery methods. Perhaps the reported technological failures are simply teaching problems in the early life of the e-Learning revolution and whilst there will always be fundamental problems integrating computers with humans in education (Scott 2000) the teaching techniques in e-Learning offer lecturers enhanced teaching tools that are capable of moving higher education into the information age.

The Learning Environment

There is a notion that an e-Learning environment offers students an improved learning experience when compared to a more traditional learning environment. Holley (2002) found that student participants on e-Learning university courses using techniques such as virtual lectures and bulletin boards, achieved better grades than students who studied in traditional learning settings. Hartley (2000) maintains that the constraints of conventional university teaching practices with regards to group working are removed in e-Learning environments, as students can participate in group activities without actually being situated in the same location. Indeed alternative relationships are developed within the context of an online community (O'Donoghue and Singh, 2001). This supports the view that e-Learning environments loosen the time and space restrictions associated with traditional university practices. However, although e-Learning environments overcome the traditional time and space constraints, universities must be cautious when deciding if distance learning environments should replace the traditional methods, as students recognise the benefits of the e-Learning environments but only when combined with traditional formats (Serwatka 2002). Many writers propose that the current significant limitations of e-Learning environments are not exposed by contemporary research. O'Connell (2002) proposes that student from non-technical backgrounds or those who are more accustomed to traditional face to face learning environments, experience problems absorbing course material in e-Learning environments. Similarly, Holley (2002) suggests that even undergraduate students who are perhaps more assertive and motivated should be given focused training on how they can take full advantage of e-Learning environments. IT skills can prove problematic for students on distance learning courses and if the

requirement for training is not addressed, students will not experience the full benefits of the e-Learning environment (Holley 2002). Furthermore, a lack of IT skills is one of the main reasons for student non-participation in e-Learning courses (Wilson 2001). Whilst not looking to replace 'real' paper with technology based resource, it is the process of augmentation and enhancement with the 'traditional' resources to enable reflection, encapsulation, consolidation and extension of the written word.

Conclusion

e - Learning could have potentially major effects on the way higher education is designed, implemented and delivered. Until now, universities have been static in their structure and delivery of higher education courses. However, demand for learning has never been so high, and this in conjunction with the need to geographically broaden learning may prompt universities to introduce e-Learning initiatives. The same demands for learning and the increased revenue of independent educational providers, has produced a real threat to the very existence of the traditional university. e-Learning may provide universities with a means of exceeding the newly formed competition, by taking full advantage of their traditional, already established reputations.

For students, e-Learning can provide an educationally-superior alternative to traditional lectures, in which learning can take place outside the lecture hall. e-Learning can also provide a model for students on how to become self directed independent learners, which may assist them to become 'life long learners'. For lecturers, networked learning may cause changes in work patterns and even change their professional role, but in addition, e-Learning provides them with the opportunity to test students in real business situations and new methods to evaluate each student's learning. The role of the lecturer is predominant in the successful delivery of networked learning initiatives, as lecturers have the influence to eliminate student's technical frustrations, make students feel empowered and encourage students to interact with one another.

For lecturers, e-Learning programmes represent a change in teaching style. The precise nature of the change is difficult to quantify, however allocation of sufficient time and resources, combined with managerial support, will help staff through the period of transition. There is a need to acknowledge that active learning within a technologically-based environment necessitates the establishment of a theoretical framework as part of the learning process, (Manning, Cohen & DeMichiell, 2003).

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