Student Learning and Information Technology Nexus

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ABSTRACT

The evidence illustrating enhancement in student learning through information technology (IT) is still questioned in many disciplines, yet education institutions world over are adopting IT with a hope of enhancing the learning effectiveness. Through exhaustive literature review and grounded theory approach this paper investigates the learning – IT nexus in knowledge society and reflects on the use of IT to augment and enhance student learning. It explores what evidence exists to illustrate that IT enhances learning, and how this changes the practice of teaching. The findings indicate that there is a strong nexus between teaching and IT in current scenario. The paper also proposes a framework for augmenting learning through IT which is crucial for the knowledge management and development.

KEYWORDS

Augment, Develop, Education, Information, Institutions, Knowledge, Learning, Student, Technology, Universities

INTRODUCTION

The term technology enhanced learning is used extensively throughout the educational world; it is the latest in an assortment of terms that have been used to describe the application of information and communication technologies (ICT) to learning and teaching. Unlike other terms such as e-Learning or on-line learning, technology enhanced learning implies a value judgement: the word “enhancement” suggests an improvement or betterment some way. However, it is rare to find explicit statements about its meaning. How does information technology enhance learning – what is the “value added”? What learning is being enhanced and in what ways – is the enhancement quantitative and/or qualitative? A more fundamental question is whether there is a generally accepted view of what constitutes learning in higher education and of how it can be enhanced?

The use of technology for learning and teaching brings optimism and opportunity for education (Baporikar, N. 2015b). It liberates both the teacher and the student in the scholarly enterprise by removing traditional boundaries and restrictions to knowledge via the open and ubiquitous access that it offers (Katz, 2010). However, it also challenges us to consider the best possible uses of that technology for our students and, more fundamentally, our actions as educators in the process of exploiting technology for pedagogical advantage (Kirkwood & Price, 2005). Through exhaustive literature review and grounded theory approach this paper investigates the learning – IT nexus in knowledge society and reflects on the use of IT to augment and enhance student learning. It explores what evidence exists to illustrate that IT enhances learning, and how this changes the practice of teaching. The findings indicate that there is a strong nexus between teaching and IT in current scenario. The paper also proposes a framework for augmenting learning through IT which is crucial for the knowledge management and development.

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LITERATURE REVIEW

A number of projects and studies have employed information technology to aid the process of transition into university by helping students to settle in and adjust, to reduce anxiety, deal with change and develop generic skills (Laing et al 2005). The work is frequently justified by and aimed at addressing key transition issues and facilitating retention (Chalk et al n.d.) by enhancing the transition experience and offering support before study begins. Initiatives in this area regularly involve online resources, activities and the opportunity to communicate with staff and other students prior to arrival, often from when students are offered/accept a place. Anagnostopoulou and Parmar (2008) suggest that using information technology may assist in easing transition by linking students to support and managing expectations. A number projects focus in part on bringing expectations in line with the reality of academic study (Laing et al 2005) and to help students know what to expect, see what university life will be like and to understand what it means to be a student (Hills 2006). Keenan (2009b) notes that offering information and resources before students arrive, in students’ own space and time, spreads the load, helps them to absorb information, gain confidence and can help develop early commitment, engagement and perseverance. Students can find induction week overwhelming and therefore such ‘transition mechanisms’ (Keenan 2006) are important and access prior to induction – to other students, to the course and to the university – is seen as a key step towards providing a successful student transitional experience.

Some have looked at utilising particular information technology across various areas, with easing the transition experience being one aspect. New technology is therefore being used in managing the process of transition beginning from the point of offer, through enrolment and induction and into the early stages of university life, all of which are seen to help students to make sense of their ‘new context' (Kennan 2009a). The use of such information technology can also help to establish new relationships and a sense of connectedness and a commitment to a community (Horsmanshof, 2004). For example the use of Facebook prior to registration can provide a way of making new friends especially with people in the same halls or on the same course and can take some of the work out of meeting others (Smailes et al. 2009). Several projects state the benefits of social networking in terms of offering a sense of belonging (Horsmanshof 2004) and for providing opportunities for social engagement in informal and relaxed environments where, for example, students can share experiences and see that others are feeling the same as them (Eberhardt 2007). Such opportunities, it appears, can facilitate successful socialisation during transition (Robinson et al 2009) and similarly can build and maintain ‘social capital’ (Ellinson et al 2007). Communication from staff is also intended to tie into this process, such as the ‘Student Messenger’ (Harley et al 2007) initiative to facilitate integration – with staff sending messages on organisational matters or general items like ‘happy new year’. Therefore using information technology to offer the opportunity for making early contacts and to support social interaction with peers and with staff is perceived to be a key benefit to transition, with information technology able to offer additional and innovative ways of fostering this support and, in theory, making it easier for students to integrate and enhancing their experience of transition.

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Although there any many examples of innovative uses of information technology in learning and teaching it is not clear whether these actually enhance student learning (Baporikar, 2014b). More readily observed is the use of information technology to support or replace existing teaching practices, with limited evidence to confirm any enhancements to the status quo. To date there has been an over-emphasis on technological manifestations and this has led to the omission of pedagogical considerations (Beetham, 2007; Conole et al., 2008; Kirkwood, 2009). Research into higher education,
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