Use of ICT and Student Learning in Higher Education: Challenges and Responses

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ABSTRACT

The use of Information and Communication Technologies (ICT) in Higher Education (HE) and the capabilities of the internet have added value to university teaching and learning. It has also tested the resolve of universities to maximise the benefits of technology integration amidst increasing class sizes, student expectations, cultural diversity and mobility of students. Understanding how students learn and devising appropriate student centred instruction and learning are considered essential to the successful implementation of ICT and allied technologies in teaching and learning. Supported by the findings of an empirical study conducted in an Australian university on student learning orientations and perceptions of course delivery, this article discusses the challenges faced by universities in the integration of technology in teaching for better learning outcomes. The study indicates that technology and learning contexts have a profound influence on student learning orientations of deep or surface learning and students seem to have mixed feelings about the impact of technology in teaching and learning.

Keywords: Cultural Diversity, E-Learning, Higher Education (HE), Information and Communication Technologies (ICT) in Teaching, Learning Context, Learning Orientations, M-Learning

INTRODUCTION

The advances of the ubiquitous information technology and communication technologies (ICT) have transformed the nature of HE and have challenged universities the world over, to review educational courses, curricula and the delivery to enhance student experience in teaching and learning. Universities are now expected to service an increasingly diverse and mobile student community in the globally competitive education market. The components of student diversity and mobility are complex and intersecting. This diversity is enhanced not only by the significant growth in the number of international students from different
backgrounds entering universities but also by communities themselves becoming more diverse along the lines of gender, class, ethnicity, culture, sexuality and other dimensions. This is further exacerbated by an environment characterised by diversity in learning styles and study approaches of students influenced by prior learning backgrounds (Ramburuth & McCormick, 2001; Prosser & Trigwell, 1999, Biggs, 1999 & 1987), increasing class sizes, changing student expectations and the increased use of computer based technologies for teaching and learning which have contributed to major pedagogical challenges faced by universities. These developments have made it necessary for universities to review educational courses and the modes of delivery on a regular basis to provide a more satisfying learning experience to students. Continuous improvement of the quality of teaching and learning is one of the key goals of universities endeavouring to fulfil their obligations as learning institutions.

The issue therefore is how effectively universities could address the learner differences and the use of technology in designing curricula and modes of delivery to improve the quality of teaching and learning. Whether technology should drive the content and pedagogy or the content and pedagogy should drive technology has been debated upon in academic circles, but the importance of established pedagogical and acculturation processes supported by technological adaptation are considered essential to create successful learning environments (Tan, Mustaffa & Salih, 2003). In this context, understanding how students learn is essential to create appropriate learning environments and continuous inquiry into teaching methods and strategies to assess their effectiveness towards enhancement of the teaching and learning outcomes therefore becomes vital. Biggs (2003) argues that teaching quality is a joint responsibility of the teachers and the institutions; while the individual teacher takes responsibility for improvement in teaching, institutions will need to take responsibility for the quality enhancements in the whole delivery system which includes technology.

The aim of this paper is to discuss the challenges faced by universities in the use and integration of technology in teaching and learning in an environment of varying learning orientations of students. Although the impact of ICT on higher education affects many facets of the university operational system – teaching and learning, internal and external management such as administration, finance, library services, research production and dissemination and student life issues (Guri-Rosenbit, 2009) - this paper will focus on the use of ICT in HE in teaching and learning only. This discussion is facilitated by the findings of an empirical study on learning orientations of a group of students in an Australian university. The paper is organised in three parts. The first part deals with the background study on student learning orientations. The second part discusses the challenges faced by universities in managing teaching and learning with technology. The paper concludes with managerial implications and directions for further research.

STUDY ON STUDENT LEARNING ORIENTATIONS

Background and Context

The main aim of the study was to ascertain the overall study orientations of students exposed to an e-learning environment and to investigate whether there are differences in learning orientations based on gender and age. Forty two students from two tutorial classes of a second year business marketing module in an undergraduate commerce degree participated in the study. The selection of students was based on convenience sampling and only students volunteering for the study were included in the sample. The study was based on a self-administered survey using the 20 item SPQF instrument (Biggs et al., 2001) to obtain an insight into the learning approaches of students. In the first section of the questionnaire, students were asked to rate each of the questions on a Likert scale of 1-5, higher rating indicating a positive inclination.
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