

Connectivism as a learning theory for the digital age



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Another epistemological framework that is essential in understanding or comprehension of the importance of technology integration in this study is connectivism. For the purpose of this study connectivism is viewed as a natural development of the constructivism not as a learning theory. The reason for adopting a new philosophical position in education according to Siemens (2004) is that traditional learning theories as behaviourism, cognitivism and constructivism do not address the learning that occurs outside of people. Since technology and networks are everywhere, Siemens believes that learning is stored and manipulated by technology and within organization. Therefore, researchers such as Siemens (2004); Ravencroft (2011), and Tracy (2009) argue that connectivism or distributed learning needs to be considered as an educational philosophy appropriate for the digital age, when personal learning occurs outside the primary knowledge. Connectivism adopts the position that learning occurs outside individuals through external connections and networks. Therefore, it is necessary for learning theories to adjust to the technological changes and be aware that learning does not happen in a linear manner anymore since content does not reside in text books only and not regulated by traditional lecture-style teaching. Siemens (2005, p. 2) argues that “ many of the processes previously handled by learning theories can now be off-loaded to, or supported by technology.”

Connectivism learning theory

For the purpose of this research, connectivism seems a logical development of the constructivism. Both appear along a continuum and none of them supersedes the other. In this global era, information is constantly changing and it is impossible for anyone to know everything. According to Tracy (2009), connectivism offers an alternative to help learners to build networks of knowledge that can be accessed whenever needed. Shriram,, et al. (2010) explain that it is necessary that in future learners understand that they do not need to know everything but rather work collaboratively to bring the best of their skills to solve problems. Downes (2007) expands on this notion and claims connectivism or distributive learning philosophy has to be adopted by teachers because learning can happen in formal and informal settings. Knowing how to access information and identifying it is more important for the learners. Shriram, ET al. (2010) indicate that experiences and interactions are necessary to form knowledge within the network, “ the process of learning lies in the ability to construct and traverse these networks.”

By adopting connectivism and constructivism as two intertwined epistemological positions, instructors become facilitators of knowledge and students become actively engaged in their own learning rather than “ un-contributing entities” as suggested by Shriram et al. (2010, p. 7). Instructors need to help learners create connections beyond the formal education setting and such connections will help students to develop networking skills effectively to manage the abundance of information available. These two positions seem relevant to the study because there is a need in higher

education today to raise awareness of the seamless integration of the roles of teachers and learners as co-constructors and co-facilitators of knowledge through different networks. Hence, a balance needs to be established between the role of teachers and learners.

The fast evolution of e-learning technologies has pushed researchers and educators to redefine their perspectives on teaching and learning as it includes a paradigm shift from the traditional form that is focussed on the knowledge and the teacher to a teacher-learner centered model. Therefore, there is a need to look for new pedagogies as the new interactive and social communication technologies can provide effective teaching and learning experiences. Consequently, faculty members need to have the knowledge and skills to become co-learners and facilitators of knowledge to promote active learning.

Benefits of integrating technology in the classroom

SIGNIFICANCE OF THE STUDY

The study is significant for several reasons: First, it adds to the body of literature related to technology integration in higher education in the Arab world, especially in the United Arab Emirates. While there is abundant literature on technology integration in higher education in many countries, very few studies have been conducted on technology integration in higher education (Al-Shboul, 2011) in the United Arab Emirates. Secondly, most of the studies on technology integration have either used qualitative or quantitative research methods (Stanely, 2013; Abouchedid & Eid, 2004; Georgina & Olsen, 2007). Very few studies have conducted a mixed-methods

approach to examine the actual use of technology tools in traditional teaching using the course management software log (Prescot, 2013). This study will use a mixed methods approach to quantify faculty actual use of different CMS features using the software logs as well as conducting individual and focus groups interviews to gain more insights. Therefore, the study addresses this methodological gap in the literature as to understand how faculty members perceive technology integration and how that is reflected on their actual use of technology through analysing the software log.

Thirdly, this study is significant in terms of the population sampled. Faculty members in the University of Sharjah comprise of more than 30 nationalities. Such population creates a very different teaching experiences guided by national mind set, experience, education, socioeconomically background, culture and traditions (Ahmed, 2010). This study will provide an opportunity to examine faculty perceptions and use of a course management system in a particular context as it is necessary, according to Seidman (2013, p. 9), “ to investigate an educational organization, institution, or process is through the experience of the individual people, the “ others” who make up the organization or carry the process.” Therefore, the insights that will be gained from this literature will help other faculty members and researchers who are actively involved in exploring the potentials of integrating e-learning technologies, particularly CMSs, in traditional classrooms. Understanding how a course management system is used by faculty as well as their perceptions allows administrators to understand the affective factors that contribute to the adoption of technology to design and implement effective faculty professional development sessions that deal with instructional

methods and technology skills (Morgan, 2003; Brooks; 2010; Buabeng-Andoh, 2012; Chang, 2008; Chou, & Chou, 2011). The study aims to support faculty so as ensure that the money invested in course management systems is well spent and used to its optimal potential for the benefit of the students.

Recommendations for further research ought to follow on how faculty integrate technology in their traditional teaching. Also recommendations will address how faculty personal characteristics will affect the adoption of technology. This study could be used for further research to investigate students' perceptions on technology integration and the most effective technology tools compared to faculty actual use of different aspects of a course management systems. Results from such studies can be informative in the adoption process of technology by faculty and administration.