Students as Co-designers of a Virtual Learning Commons: Results of a Collaborative Action Research Study

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ABSTRACT

In order to meet the 21st century students' learning styles and expectations, as well as keep up with technological advancements, many academic libraries are creating virtual learning commons. This paper reports on phase 1 of a larger project that aimed at investigating the design of 21st century physical and virtual learning commons in the library at a higher education institution in the United Arab Emirates. Using a collaborative action research, project participants explored the design and implementation of a virtual learning commons to support learning activities. Two action research cycles were implemented where students acted as co-designers. Multiple methods of data collection were adopted. Based on outcomes, a blog space was created to facilitate discussions of readings. This study contributes with a practical example of how student voices and preferences can influence the design of a virtual learning commons. Phase 1 also worked as a catalyst to further the discussion of the larger virtual learning commons in academic libraries. The paper also discusses several recommendations for future improvements.

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INTRODUCTION

Mobile technologies and wireless network are broadening the concept of physical learning spaces to include anytime and anywhere access (Brown & Long, 2006). Since virtual spaces are claiming their place alongside physical spaces as learning environments, library learning commons need to expand and accommodate the virtual component. Lomas and Oblinger (2006) observed that the digital students' world does not include only the physical but also the virtual where they interact with individuals, access and share information as well as explore ideas. These students have been described as social, collaborative and multitasking oriented, and they tend to prefer hands-on activities (Brown, 2005; Oblinger & Oblinger, 2005). They also learn by searching, sieving, and synthesizing rather than assimilating information from a single source (Dede, 2005). In order to meet the digital students' learning styles, needs and expectations as well as keep up with technological developments, it is clear that library learning commons must adapt and evolve (Sinclair, 2007).

In response to the need to continually develop, academic libraries are now engaged in the process of establishing virtual learning commons supported by multimedia and Web 2.0 applications (Beagle, 2012; Dewey, 2008; Jaggars & Wolven, 2014). Virtual learning commons allow students to interact, meet and collaborate with peers and develop communities. For example, Lippincott (2006) described how

a librarian created a virtual learning commons at an American University. In such space, students could ask questions, read responses and share resources with peers. Steiner and Holley (2009) predict that physical learning commons will continue to have increasingly prevalent virtual elements. However, Milne (2007) stresses the importance of understanding how to blend the two environments. Researchers like Lippincott (2005) suggested consulting students and included them on teams that make decisions about the design and implementation of such learning environments. Lippincott observed that when students' perspectives are considered, it increases the chances that the new facilities will meet their needs and expectations.

Concurrent with the need to evolve and address the needs of our 21st century students, project participants engaged in the creation of a virtual learning commons using a collaborative action research. This paper reports phase 1 of a larger project that aimed at investigating the design of 21st century physical and virtual learning commons in the library at our higher education institution in the United Arab Emirates. In phase 1, we sought to answer the following two research questions: 1) how can we design and implement a virtual learning commons to support formal and informal learning? And 2) how does a selected group of students perceive the virtual space after its implementation? Since the potential of virtual learning commons is yet to be realized (Secker, 2010), this paper expects to contribute with empirical insights into this new area of inquiry. This is line with Matthews and Walton's (2014) remark on the importance of knowing what others are planning and implementing for their library spaces. In addition, this paper provides a practical example of how student voices and preferences can influence the design and implementation of a

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virtual learning commons. It should be noted that, as discussed in the literature review in the next section, learning commons support both formal and informal learning (Bennett, 2007). In phase 1 of our project, students were co-designers of a virtual learning commons and the study was emergent which revealed students' preference for more informal learning.

LITERATURE REVIEW

Learning spaces in higher education cover several areas. For example, they may refer to the entire university campus, classroom, lecture halls or seminar rooms (Bennett, 2007; Warger & Dobbin, 2009). This paper is concerned with learning spaces organized in academic libraries with the purpose of promoting active student learning. Although there is no agreement on a terminology and definition (Lippincott, 2010), many researchers refer to this kind of learning spaces as learning commons (Bennett, 2007; Turner, Welch, & Reynolds, 2013). To exemplify this lack of agreement, Lippincott (2010) uses the terms learning commons, information commons and commons interchangeably while Hussong-Christian, Rempel, and Deitering (2010) adopts the term learning commons as they think this term has become more widespread. The learning commons model indicates that the library is an integral part of students' learning experience (Hussong-Christian et al., 2010). It is designed to meet students' diverse needs, whether in groups or as individuals (Sullivan, 2010). Learning commons also support various forms of formal and informal learning (Bennett, 2007). Some of the individual or collaborative learning opportunities may stem directly from curricular expectations while others are informal, social and organized by the students (Adams & Young, 2010). Bennett (2003, p. 38) added that "the core activity of a Learning Commons…would be built around the social dimensions of learning and knowledge and would be managed by students themselves for learning purposes that vary greatly and change frequently.".

Recently, wireless and mobile technologies are allowing any space to become a learning space (Hussong-Christian et al., 2010). According to Loertscher and Koechlin (2012), the virtual learning commons is the on-line extension of the physical learning commons. The former does not imply a library web page that provides one-way information; rather, it is a virtual space where individuals and groups are actively learning. In a similar vein, Sullivan (2010) saw virtual learning commons as enabling access to electronic resources and social networking tools that encourage exploration and discussion beyond the walls of the library. Beagle (2012) and Sinclair (2007) also discussed linkages between learning commons and web 2.0 tools that can be accessed from anywhere anytime as long as there is a wireless connection. Research by Secker (2010), for instance, reported several initiatives that enhanced the traditional library learning spaces and services using web 2.0 tools. These initiatives included, for example, the use of Twitter as a way to keep students up to date with library news. It also used Facebook and a blog to organize news, highlights, and topical discussion events. Secker concluded that the web 2.0 tools provided a valuable role in supporting the library.

Despite its potential to support student learning experiences, it is not clear yet whether virtual learning commons will complement or replace the physical learning commons (Steiner & Holley, 2009). Lomas and Oblinger (2006) believe that both environments are complementary. Students may want interactions with others using the physical space despite being digital and mobile. In his classic article, Beagle (1999) discussed the two learning environments, suggesting "functional integration of technology and service delivery to realign the library with the rapidly evolving digital environment" (p. 83). However, creating services that have both virtual and physical components is one of the opportunities and challenges of learning commons (Lippincott, 2006). A possible solution for the challenges could be asking users, through surveys or other data sources, regarding their preferences and expectations about the design of such spaces in the library. For example, Bailin's (2011) study provided insights into the needs of students regarding their expectation from 21st library learning spaces. It was found that students highly valued collaborative spaces that promoted both formal and informal learning equipped with technology. The study also suggested that students would require a physical learning space in the library in addition to the virtual.

Researchers like Somerville and Collins (2008) and Mirijamdotter, Somerville, and Holst (2006) went beyond surveys and considered stakeholders input in the planning and improvements of learning commons in the library. Mirijamdotter et al. (2006) adopted a research methodology that involved students in the design and evaluation of the physical and virtual learning commons. Results showed that students' suggestions and ideas encouraged space planners to re-think their initial design assumptions. Students, for example, suggested setting up explicit purposes for collaborative activities. During the evaluation process, students also recognized the need for more robust technology which engaged themselves in finding alternative technologies such as blogs and wikis to support the interactions. Similarly, Brown-Sica, Sobel, and Rogers (2010) discussed the planning for learning commons design using a user-centered and collaborative action research. The learning spaces committee planned to include workshops and invite students to consider the re-design of the physical space through focus group and surveys. According to Brown-Sica et al., the committee felt that if students were not involved, the re-design of the learning commons would not have been authentic and user-centered. This finding agrees with Dewey (2008) who pointed out that students or faculty should be co-creators of new spaces to ensure relevance and usability.

ACTION RESEARCH

Our research was inspired by studies such as those by Mirijamdotter et al. (2006) where students' voices and preferences were considered in the design of learning commons. We adopted an action research (AR) to investigate how to re-design the physical commons and create virtual learning commons in the library to better accommodate our 21st century students. AR is a systematic approach that contributes to improvements of a particular situation in teaching, school environment or community (Zeichner, 2009) or any other settings where there is a problem needing a solution or change (Cohen, Manion, & Morrison, 2007). As noted by Cohen et al. (2007), AR is participatory through which individuals work toward improving their own practice. Although AR can be done individually, it is also collaborative involving those in charge for improving a situation. Lodico, Spaulding, and Voegtle (2010) noted that "Collaboration promotes a democratic attitude toward research by inviting all participants in a learning community to play an active role in research" (p. 320). We followed a collaborative AR as we worked as team consisting of different individuals where their views and contributions were taken into account to better understand the situation we were trying to improve.

Several action research models are available in the literature (e.g. Elliot, 1991; Kemmis & McTaggart, 2000). Although each model explains the research process using a different number of steps, most follow a cyclical and repetitive process of inquiry which begins with identification of a problem, planning, data collection, evaluation or reflection (Riding, Fowell, & Levy, 1995). Koshy (2005) recommends selecting an action research model that best suits the purpose of an inquiry. Considering that some of the co-researchers in our study were new to action research, we adopted a simple model by Kemmis and McTaggart (2000). This model proceeds in a spiral of steps consisting of 1) develop a plan, 2) act, 3) observe, and 4) reflect. We implemented two action research cycles. Cycle 1 consisted of a preliminary phase where data were collected from a sample of undergraduate students on the design of physical learning commons and virtual learning commons in the library. Cycle 2 implemented the action plan developed in cycle 1. This paper focuses on the design of a virtual learning commons