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Examining the relationship among student perception of support, course satisfaction, and learning outcomes in online learning

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ABSTRACT

Support for student learning is a key element in optimizing student learning experiences in any learning environment and its importance has been widely discussed. This study looked at student support, particularly in the course context, focusing mainly on guidance provided to students within a course. Three categories of support were identified and used for the purpose of this study: instructional, peer, and technical support. A total of 110 students completed an online survey on students' perceptions of support and course satisfaction in an undergraduate online course at a large southeastern university. The results showed perceived support was significantly related to their overall satisfaction of the online course. The findings of this study suggest that teachers should communicate what types of support are available to students and provide an easy way of accessing and taking advantage of the support.

1. Introduction

Support for student learning is a key element in optimizing student learning experiences in any learning environment and its importance has been widely discussed. Student support, for example, has been closely related to student motivation and learning. Earwaker (1992) asserts that the aim of support for student learning is "to ensure that they derive maximum benefit from their course" (p. 11). Student support is needed to help students achieve learning goals and objectives successfully (Curley & Strage, 1996).

The quality of student support becomes the primary component to determine the effectiveness of a course (Küçük, Genç-Kumtepe, & Taşcı, 2010). Student support was once regarded as an add-on to pre-designed courses, but it has since been recognized that it should be considered and integrated into course design (Thorpe, 2002). Along with instructional support, teachers also need to provide technical and pedagogical assistance in technology-enhanced learning environments (Berge & Muilenburg, 2001). When preparing a course, faculty and instructional designers need to address how to support students in various ways. Creating learning environments where appropriate support for student learning is designed and provided becomes critical, particularly in online courses. In this paper, a framework of student support in online learning is proposed and the survey results from a study done to identify on the relationship among student perception of support, course satisfaction and learning outcomes are reported.

2. Framing student support

Teachers and instructional designers should provide a supportive learning environment (Moisey & Hughes, 2008). Student support becomes one of the critical components affecting a student's success in any online learning environment (Rovai & Downey, 2010; Wheeler, 2006). Appropriate support strategies to meet students' needs and learning styles are likely to enhance students' learning and their learning experiences. Mullen and Tallent-Runnels (2006) suggest that instructors need to provide support to students while challenging them in order to increase their active engagement in learning. The provision of student support involves providing tutoring, counseling, and academic advising, and office hours to students.

Moore and Kearsley (2005) regarded student support as guidance and counseling services including orientations to online learning, administrative assistance, and social interaction with participants. Moore and others have described the theory of transactional distance (Moore, 1993; Saba, 2007; Saba & Shearer, 1994) which describes the pedagogical distance between a teacher and a learner through communication channels. The transactional distance depends mainly on dialog among participants and course structure. According to this theory, the number of students and class size impact dialog among participants. The course structure includes learning objectives, activities, and course contents. According to Saba, increasing dialog decreases

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transactional distance. Therefore student support should narrow the transactional distance among participants by increasing dialog, to provide guidance, assistance, and enhance interaction in an online learning environment.

Thorpe (2002) recognized two contexts for learner support: the institutional context and the course context. In the institutional context, students need to have support regarding admission, registration, scholarship, research, and student life issues. Selim (2007) added library services, help desk, computer labs and facilities to the institutional support. In the course context, students look for clarification of course materials, assignments, activities, and assessments for the specific course. This study, in particular, looked at student support in the course context, focusing mainly on guidance and support provided to students within a course.

2.1. A framework of student support

There are significant differences in students' perception of their online learning experiences (Muilenburg & Berge, 2005). Likewise, students may feel different toward student support that is designed to help them learn. It is assumed that the student perception of support is related to the transactional distance, which eventually influences their learning experiences. Indeed, students' perceptions of support are positively related to perceived learning, which includes student learning outcomes, student achievement and course satisfaction (Mullen & Tallent-Runnels, 2006). Therefore, learning environments should provide proper support as well as appropriate structure of course materials and activities, effective ways of communication in order to decrease the transactional distance and optimize student learning. Three categories of support were identified and used for the purpose of this study: instructional, peer, and technical support (see Fig. 1).

2.1.1. Instructional support

Instructional support refers to instructional guidance to learning, which involves answering students' questions, correcting their misunderstandings, providing clear instruction, relevant resources, and constructive feedback on their assignments and performance. Moreover, instructional support includes dialogs and course structures to motivate and encourage students to learn and master course materials and achieve learning objectives. Mullen and Tallent-Runnels (2006) recognized academic and affective support and found that both types of support were positively related to course satisfaction and perceived learning outcomes in online courses.

Instructional support comes primarily from the course instructor and teaching assistants, but technology can be used to provide the support to individual students and instructional contexts (Chen, Lambert, & Guidry, 2010). Scaffolding (Ge & Land, 2003), cognitive tutors (Koedinger & Corbett, 2006), apprenticeship (Collins, Brown, & Newman, 1989), and pedagogical agents (Baylor & Kim, 2005) are often used to support student learning. Scaffolding, for example, is a type of instructional support that can be characterized as indirect guidance and fading (van Merrienboer, Kirschner, & Kester, 2003). Scaffolding provides guidance toward the completion of a learning task, and this support is gradually faded until students can perform the task on their own. Question prompts have been frequently used as a scaffolding technique and reported that the prompt strategy facilitates student learning by "directing students' attention to important aspects of the problem, activating their schema, eliciting their explanations, and prompting them for self-monitoring and self-reflection" (Ge, Chen, & Davis, 2005, p. 220). Curley and Strage (1996) found that high instructional support, coupled with high instructional demands, are related to more sophisticated study strategies and higher level of performance.

2.1.2. Peer support

Peer support refers to peer-to-peer learning which involves students supporting each other on academic or non-academic issues. Encouraging social interaction and peer support plays an important role in learning environments. As collaborative works and social interaction become an important component of learning, students are more involved in helping other students and feel a sense of learning community. In online learning environments, in particular, peer support gets more important as online students may feel isolated easily due to a lack of social interaction among students (Muilenburg & Berge, 2005). In a factor analysis study, Muilenburg and Berge found that most students perceived the lack of social interaction as the most severe barrier and that improving interaction among students would make a course more effective and enjoyable.

Peer support occurs through learner–learner interaction, including group discussion, group projects, peer teaching, peer tutoring, and peer facilitation. Students can also support other students by answering questions, encouraging each other, and forming a study group for the course. In the study of Peer Support, Ashwin (2003) reported that a peer learning strategy was correlated to students' academic performance. Goldschmid and Goldschmid (1976) reviewed peer teaching models in higher education and asserted that the peer teaching strategy might benefit both student teacher and student learner. In addition, they found that the peer teaching model could develop interaction among students and collaboration skills, and thus facilitates active participation.

2.1.3. Technical support

Technical support includes providing assistance for any technical issues that students may face in the online and blended courses. Regardless of whether courses are online or blended courses, the use of technology has been increasing. Song, Singleton, Hill and Koh (2004) reported that the technical problem was the primary component to create challenges and to determine student satisfaction in online learning environments. Muilenburg and Berge (2005) reported that students who were comfortable using online learning technologies perceived significantly fewer barriers to online learning than those who were not familiar with the online technologies. Therefore, teachers and instructional designers need to make sure that students feel comfortable with online technologies and that any technical issues are addressed (Muilenburg & Berge, 2005; Song, et al., 2004).

3. Research questions

It was assumed that student support would decrease the overall transactional distance of the course. Some students may perceive the same support differently than other students and this difference may serve to either facilitate or hinder their engagement in learning. Students' perceptions of support may vary depending on many factors, including course formats, structures, communication tools, the number

Fig. 1. A framework of student support for learning.