Relationships between students' perceived team learning experiences, team performances, and social abilities in a blended course setting

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ABSTRACT

The main purpose of this study is to examine relationships between the social abilities, perceived team learning, and the performances of students in a blended learning setting. The participants, 82 undergraduate students, worked in small teams on a research method task over one semester. The instruments used for this study included a five-factor social ability scale and a one-dimensional perceived collaborative learning scale. The results showed moderate significant relationships between students' perceived team learning scores and students' peer social presence scores as well as weaker relationships between team learning and two social ability subscales, written communication skills and instructor social presence. There appears to be an important effect of peer social presence that is linked to learning and performance. Using a blended learning model may have an important impact on increasing social interaction and learning with a team learning approach thereby helping students undertake comprehensive tasks and increase student learning.

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1. Introduction

Well-accepted instructional theories such as constructivism and social learning have emphasized the positive implications of collaborative, team-based strategies on students' learning (Gomez, Wu, & Passerini, 2010). Specifically, social learning theories indicate a strong relationship between interaction and learning experiences of students who actively and collaboratively participate in the learning process (Vygotsky, 1978). In regard to team/collaborative learning activities, in recent years, collaborative learning activities in higher education have become an interesting topic for researchers. The main goal of this paper is to investigate the association among social ability – that is critical for team interaction, perceived team/collaborative experience – that is critical for effective team work, and academic achievement – output of learning.

2. Context of the study

Bandura (1986), in his social cognitive theory, stressed triadic reciprocal causation of cognitive, environmental, and behavioral factors, and how learning process occurs based on the interactions of these factors with each other in an appropriate social setting. In this particular study, team/collaborative learning activities were organized for learners. In conjunction with social, constructivist, and active learning theories, team learning (TL) strategies can effectively provide students a comprehensive learning experience (Michaelsen, Knight, & Fink, 2002). Regarding those strategies, with the support of computer-

mediated communication tools, students working in groups can share resources and discuss tasks with their peers in and out of the classroom (Gomez et al., 2010).

Also, considering the vitality of environmental factor of the Bandura's theory, a blended approach of both face-to-face and online delivery was applied, providing a balance of information and communication technologies that offer unique instructional flexibility by increasing students' interaction (Vaughan, 2007). Moreover, in terms of behavioral factors, actual team performance scores were used. The next section provides details about those factors.

2.1. Learning in teams

A team refers to two or more people assigned to particular roles in order to complete a common goal (Salas, Dickinson, Converse, & Tannenbaum, 1992). Many organizations have successfully applied team approaches to solve ill-structured or complex problems, to complete tasks that are too difficult to be managed individually, and to benefit from the collective experience, skills, and knowledge of team members (Cooke, Salas, Kiekel, & Bell, 2004; Johnson & O'Connor, 2008; Michaelsen & Sweet, 2008). Moreno, Gonzalez, Castilla, Gonzalez, and Sigut (2007) emphasized the association between team success and social skills of the individuals in teams. Similarly, Johnson, Khalil, and Spector (2008) indicated the crucial effect of students' social and communication skills on team effectiveness and, consequently, students' learning. Thus, such learning experience, if used effectively, helps improve communication, discussion, problem-solving, decision-making, and creativity skills, as well as increasing the ability to work with

others, an essential part of being in a social community (Johnson et al., 2008; Johnson & O'Connor, 2008).

2.2. Using team learning in blended learning settings

Blended learning (BL), also called hybrid learning, refers to the combination of online and face-to-face teaching approaches. A learning environment designed around the beneficial components of both instructional delivery methods provides the most effective setting for students and instructors (Atıcı & Türel, 2011; Dziuban, Moskal, & Hartman, 2005). BL can enhance students' experiences by adding web-based collaborative tools, content delivery tools, asynchronous personalized instruction, synchronous web conferencing, and tutorials to face-to-face instruction (Singh, 2003). Thus, learners can be involved in the learning process out of traditional contexts and timeframes by discussing and sharing course-related issues with their peers and instructors. Furthermore, BL enables students and instructors to initiate interactions in a face-to-face setting and to maintain and enhance those interactions later via web-based tools in an online setting (Olapiriyakul & Scher, 2006).

Because of these advantages, BL helps teachers integrate instructional strategies that require more significant interaction, including TL. By leveraging the success of TL, instructors can observe, guide, and assess teams while students collaborate with each other and their instructor to complete common tasks via online tools in an extramural setting. Instructors can also provide additional online resources, create discussion forums, offer instant feedback, and help students build teams (Johnson, Top, & Yukselturk, 2011). Therefore, many researchers recommend supporting traditional face-to-face courses with online tools that enhance student interactions and social and communication abilities, which may have a substantial impact on both team effectiveness and individual learning (Alavi, Yoo, & Vogel, 1997; Johnson et al., 2008; Williams, Duray, & Reddy, 2006).

With the rapid development and diffusion of online systems, some researchers have focused on social elements of learning in order to provide more interactivity and, as a result, have created more effective learning settings (Garrison & Anderson, 2003; Rovai, 2003). Although numerous online learning tools offer higher levels of interaction, communication, and collaboration, many researchers have stressed the lack of social presence as the main challenge of online learning (Arbaugh, 2000; Garrison & Anderson, 2003; Rovai, 2003).

2.3. Learning and social ability

Many learning theorists, including Bandura (1977) and Vygotsky (1978), have stressed that education is a kind of social practice and learning occurs through social interactions (Laffey, Lin, & Lin, 2006; Wegner, 1998). Specifically, in BL settings in which team learning are implemented, learners need to have the appropriate skills to engage at the levels supported by the course design. In the current paper among those skills, only social ability skills were taken into consideration. In this study, social ability addresses students' perceptions about social interactions and capacities when learning via computer-mediated methods. When students work in groups (whether online or face-to-face), social interaction with teammates, instructors, and other classmates plays a key role in individual learning (Gomez et al., 2010; Williams et al., 2006).

In order to understand how students' social interactions, that are essential for their learning, contribute to overall learning experiences and outcomes, Laffey et al. (2006) have suggested the examination of social abilities in online learning settings. Social ability is a critical construct that helps educators to interpret perceived ongoing social interactions in online learning settings. In their first study, Laffey et al. (2006) defined the prominent constructs of social ability as social presence, social navigation, and social connectedness. Extending the initial construct of social ability provided by Laffey et al. (2006); Yang, Tsai, Kim, Cho, and

Laffey (2006) reviewed the literature in regard to factors that influence social interactions and suggested that students' perceived privacy (comfort sharing personal information) and written communication skills are essential for the examination of social ability. They developed a 30-item construct consisting of five factors: peer social presence, written communication skills, instructor social presence, comfort sharing personal information, and social navigation. The following section explores each factor in details.

2.3.1. Peer social presence

Social presence refers to the sense of being in a learning context and belonging to a group and it can be used as an essential predictor of students' learning experiences and satisfaction (Gunawardena & Zittle, 1997). Social presence is often stressed as one of the main components of social interaction (Baek & Cho, 2012; Kim, 2011) and it is considered different from each other as peer and instructor social presence under social ability construct (Swan & Shih, 2005; Yang et al., 2006). According to Pollard, Minor, and Swanson (2014), both instructor and peer social presence were essential in elucidating the classroom community.

2.3.2. Instructor social presence

This factor of social ability refers students' perceptions about how responsive and accessible the instructor is during the learning process in particularly online settings. Palloff and Pratt (2003) stressed that strategies such as "posting regularly to the discussion board, responding in a timely manner to e-mail and assignments, and generally modeling good online communication and interactions" (p. 118) are necessary in terms of instructor social presence.

2.3.3. Written communication skills

Those skills refer to students' capabilities basically regarding the written language. Tsai, Kim, et al. (2008) and Tsai, Yang, and Laffey (2008) asserted that written communication skills are vital for students particularly who use both synchronous and asynchronous online communication. In these settings, text-based communication is the one preferred predominantly since most online communication tools (i.e., discussion forums, email, instant messenger) are text based. Thus written communication skills are considered a critical predictor of effective learning in online courses (Mandernach, Donnelli, & Dailey-Hebert, 2006; Tsai, Kim, et al., 2008; Tsai, Yang, et al., 2008).

2.3.4. Comfort sharing personal information

It refers students' confidence and comfort about sharing information related to themselves which represents students' acknowledging their class as a learning community where they belong to (Swan & Shih, 2005). Swinth, Farnham, and Davis (2002) also pointed out that students' being comfortable in sharing their personal information foster the interpersonal relationships of students in their online communities (as cited in Tsai, Kim, et al., 2008).

2.3.5. Social navigation

It addresses students' perceptions and awareness of the actions of his instructor and peers and the effects of those actions on his own work throughout the course. Dourish (1999) defines the social navigation as an essential aspect of collaborative work since it refers students awareness of how others in a computer supported collaborative learning settings steer and construct the information-seeking process. Yang et al. (2006) emphasized the need for more research on students' perceptions regarding the effect of their peers' and instructors' actions and engagements to facilitate understanding of the social navigation construct.

2.4. Purpose of the study

Many researchers (Arbaugh, 2000; Gunawardena & Zittle, 1997; Laffey et al., 2006; Rovai, 2003; Swan et al., 2000) have examined the