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Students' perceptions of instructors' roles in blended and online learning environments: A comparative study

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A B S T R A C T

This study develops an instrument—the Online Instructor Role and Behavior Scale (OIRBS)—and uses it to examine students' perceptions of instructors' roles in blended and online learning environments. A total sample of 750 university students participated in this study. Through a confirmatory factor analysis, the OIRBS was validated in five constructs: course designer and organizer (CDO), discussion facilitator (DF), social supporter (SS), technology facilitator (TF), and assessment designer (AD). The results show that the five factor structures remained invariant across the blended learning and online learning. Both students in blended learning environments and students in online learning environments exhibited the greatest weight in the CDO dimension, followed by the TF and DF dimensions. In addition, students in the online learning environments scored higher in the DF dimension than did those in the blended learning environments.

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1. Introduction

With the development of technology rapidly expanding into higher education, online instruction has emerged as a popular mode and a substantial supplement to traditional teaching. Over the past few years, a growing number of studies have explored the perspectives of online instructors who use various technologies and pedagogies for teaching (e.g., Bailey & Card, 2009; Ellis, Hughes, Weyers, & Riding, 2009; Motaghian, Hassanzadeh, & Moghadam, 2013; Zingaro & Porter, 2014). Research in this field has generally concluded that educators regard both traditional education as chiefly instructor-centered and online education as chiefly student-centered. Owing to the ongoing shift from traditional classroom-based education to online education, many instructors no longer have direct control of the teaching process and they act more as facilitators than as traditional lecturers (Arbaugh, 2010; Schoonenboom, 2012).

Instructors have many concerns when taking on the role of online educators. The preliminary concern is how to adapt to the relatively new role and thus effectively shoulder the related responsibilities required by online education. A significant role adjustment for students may be required as well if they want to be successful in an online learning environment. Students may shift from being a traditional passive classroom learner to being an active online inquirer. With such changes in learning contexts and in the roles of instructors and students, corresponding changes may have taken place in students' expectations and perceptions regarding the competence with which teachers should provide assistance, whether in advance of engaging in online studies or while in the process of doing so (Matzat, 2013; Zingaro & Porter, 2014).

In addition to online education, blended teaching is growing in popularity. Educators regard it as an essential teaching component that promotes effective learning (Matzat, 2013; Ocak, 2011). Dziuban, Moskal, and Hartman (2005) identified two principal advantages from which participants in blended teaching can benefit: strengthened learning engagement and strengthened interaction. However, Humbert (2007) showed that faculty members are under sometimes oppressive pressure to deal with online interactions and technical issues in blended courses. Ocak (2011) proposed that the reasons for faculty members' lack of interest in teaching blended courses include formidably complex course structures, the necessity of intimidatingly careful preparation and planning, and a lack of effective communication. In response to such problems, Salmon and Lawless (2006) stated that instructors' changing roles constitute a critical issue in blended teaching.

The purpose of this study, therefore, is to examine students' perceptions of instructors' roles and associated behaviors in learning environments that are entirely or partially web-based. In this study, we have adopted the definition that Lin and Overbaugh (2009) assigned to

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the term 'blended instruction': it is teaching "in which a blend of both traditional classroom instruction and online learning activities are utilized, including synchronous and asynchronous communication modes" (p. 999). To examine students' perceptions of instructors' roles in different web-based learning environments, we created the Online Instructor Role and Behavior Scale (OIRBS) and examined its psychometric properties, each corresponding to one of two samples of students. The first sample comprised students enrolled in a course having blended learning environments while the second sample comprised students enrolled in a course having online learning environments. In this regard, we asked four research questions:

1. Can a measurement model of OIRBS be established?
2. If it can be established, is the measurement model of OIRBS invariant in the presence of two distinct learning environments?
3. What perceptions do college students have toward their instructor's roles in two distinct learning environments?
4. Do the learning environments correspond to any difference in college students' perceptions of the roles and the associated behaviors of instructors?

2. Literature review

2.1. Studies on online instructor functions

There is a growing understanding that teaching online is different from teaching face-to-face. Cho and Cho (2014) pointed out that online instructors' scaffolding for interaction had a significantly positive influence on students' behavioral and emotional engagement. This finding strongly suggests that a particular set of pedagogies should be in place to help online teachers teach. Knowlton (2000) argued that instructors no longer amount to an umpire, a judge, or a dictator; instead, they serve students in the capacity of a coach, a counselor, a mentor, and a facilitator. In an interview-based study of online instructors, Hsieh (2010) examined interactive activities, evaluation criteria, and self-expectations to identify experiences of online instructors. In a similar study, Liu, Bonk, Magjuka, Lee, and Su (2005) conducted interviews with 28 faculty members and explored four dimensions of online teachers' roles: the pedagogical, managerial, social, and technical dimensions. The aforementioned study suggested that instructors attempting to establish a more engaging environment for online learning should play roles that have been transformed pedagogically, socially, and technologically.

Another relevant study was undertaken by Lim and Lee (2008). These researchers argued that teachers in computer-supported learning environments should have technical, managerial, and facilitative skills, and that discussions about teachers' roles should be open to a more diverse set of views. Similarly, Wilson, Ludwig-Hardman, Thornam, and Dunlap (2004) directly identified five significant tasks that instructors should perform: (1) providing a learning-oriented infrastructure that comprises syllabi, calendars, communication tools, and instruction resources; (2) modeling various strategies for effective participation, collaboration, and learning; (3) monitoring and assessing students' learning and providing them feedback, remediation, and grades; (4) troubleshooting and resolving instructional, interpersonal, and technical problems; and (5) creating a learning community characterized by an atmosphere of trust and reciprocal concern.

Most of the prior literature, as mentioned above, was based more on conceptual development and qualitative interview data than on quantitative data analysis of instructors' changing roles; however, recent research on online teaching has started to probe perspectives drawn from solid, diverse samples. Mazzolini and Maddison (2007) investigated how instructors' participation rates, the timing of instructor postings, and the nature of these postings are related to students' academic engagement and to their perception of this engagement. The findings indicate that instructors' efforts to post on forums could influence students' discussions and participation on the forums in unexpected ways. Cho and Cho (2014) used a sample of 158 college students and found that instructors' role as a facilitator for social interaction is critical in creating positive online learning environments, a pattern that in turn promotes academic engagement among students. In fact, recent research has examined how instructors' characteristics, attitudes, and behaviors can influence online courses. For example, Liaw, Huang, and Chen (2007) presented questionnaires to a sample of 30 instructors and 168 college students. The results indicate that the instructors had very positive attitudes toward e-learning, particularly in regards to perceived self-efficacy, enjoyment, usefulness, and behavioral intention of use. Liaw et al. also noted that system satisfaction and multimedia instruction could positively affect instructors' attitudes toward and enjoyment of e-learning. Similarly, Arbaugh (2010) evaluated faculty members' characteristics and behaviors on display in 46 MBA courses offered by a Mid-Western U.S. university. According to the findings, instructor behavior is an important factor in the enhancement of student learning outcomes. Teaching presence and immediacy behaviors were positive predictors of students' perceived learning and satisfaction with the educational delivery medium. Hence, Arbaugh suggested that instructors should structure and organize their courses in advance so that they can focus on efficient engagement with their students while class is in progress.

A number of studies have empirically investigated educational Internet use, which has the potential to motivate students and to strengthen their interactive behaviors and their autonomy in the educational process (Claudia, Steil, & Todesco, 2004). However, some studies have shown that online instructors lack the time, the relevant training, or the support to make proper use of such Internet tools (Muir-Herzig, 2004). While conducting a study in the Netherlands, Mahdizadeh, Biemans, and Mulder (2008) noted that instructors used e-learning tools mainly to present course announcements, news, course materials, and PowerPoint displays. These uses were all for preliminary presentation purposes rather than for advanced communication or collaboration purposes. In other words, even when all kinds of e-learning tools are available, instructors tend to use relatively basic tools for teaching, instead of tools for online communication or collaboration. In order to promote instructors' effective online teaching and to eliminate any barriers in the teaching process, educators in general should strive to understand instructors' roles in online learning environments as well as instructors' associated behaviors.

2.2. Online instructors' roles and behaviors

To adequately examine students' perceptions and perspectives of online instructors' roles and behaviors, researchers need an appropriate framework and a valid instrument with which they can categorize and measure participants' perceptions. Kim and Bonk (2006) argued that the most important skills for an online instructor are the ability to moderate or facilitate learning and the ability to develop