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A qualitative analysis of institutional drivers and barriers to blended learning adoption in higher education

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ABSTRACT

The authors previously proposed a framework for institutional BL adoption (Graham, Woodfield, & Harrison, 2012), identifying three stages: (a) awareness/exploration, (b) adoption/early implementation, and (c) mature implementation/growth. The framework also identified key strategy, structure, and support issues universities may address at each stage. In this paper, the authors applied that framework as well as Rogers' (2003) diffusion of innovations theory to determine the degree to which institutional strategy, structure, and support measures facilitate or impede BL adoption among higher education faculty. In addition, the authors explored whether higher education faculty's innovation adoption category affects which measures facilitate or impede BL adoption. To achieve these objectives, the authors surveyed 214 faculty and interviewed 39 faculty at a school in the adoption/early implementation stage of BL adoption. The authors published the survey results in a prior article. The current article explores the results of the interviews.

1. Introduction

Increasing numbers of institutions of higher education are adopting blended learning (BL) (Garrison & Vaughan, 2007). By 2004, 45.9% of undergraduate institutions had BL offerings (Allen, Seaman, & Garrett, 2007). Within the last several years, scholars have predicted that BL will become the "new traditional model" (Ross & Gage, 2006) or the "new normal" in higher education course delivery (Norberg, Dziuban, & Moskal, 2011).

Those implementing BL must determine how to facilitate faculty adoption (Christo-Baker, 2004). Faculty are the primary pedagogical decision-makers in their classrooms (Graham & Robison, 2007). Despite faculty's vital role in the success of a university's BL implementation efforts, "little has been published regarding faculty adoption of hybrid teaching" (Kaleta, Skibba, & Joosten, 2007, p. 112).

Accordingly, we identified and explored factors that influence whether faculty members choose to adopt BL. Specifically, we sought to provide those interested in implementing BL with information concerning how their institutions' decisions regarding BL implementation may influence faculty adoption.

Graham, Woodfield, and Harrison (2013) provided an institutional BL adoption framework that identified specific strategy, structure, and support issues that institutions typically address when implementing BL. In addition, we employed Rogers' (2003) diffusion of innovations theory to address the disparate characteristics of potential faculty adopters. Previously, we surveyed faculty members at Brigham Young University Idaho (BYU-I) to investigate the degree to which institutional strategy, structure, and support decisions influenced their willingness to adopt BL (Porter & Graham, 2015). For this study, we conducted follow-up interviews with survey respondents to explore why faculty reported certain strategy, structure, and support decisions would facilitate or impede their BL adoption. We focused our interviews and analysis on two of Rogers' innovation adoption categories—the early majority (EM) and the late majority (LM)—due to their pivotal role in institutional BL adoption. Ultimately, we addressed the following two research questions:

1. Why do certain institutional strategy, structure, and support decisions facilitate or impede BL adoption among higher education faculty in the EM and the LM?
2. How does the innovation adoption status of higher education faculty members among the EM and the LM affect why institutional strategy, structure, and support decisions facilitate or impede their BL adoption?

2. Literature review

In this literature review, we briefly define BL and provide an overview of faculty adoption research. We also describe the two theoretical frameworks on which we based our study, namely, Graham et al. (2013) framework for institutional adoption and implementation of BL in higher education and Rogers' (2003) diffusion of innovations framework.

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2.1. BL definition

Although an increasing number of people are discussing BL, ambiguity remains regarding how to define it (Graham, 2013). While a number of scholars agree that BL combines face-to-face and online instruction, they disagree on a number of issues, including what is being blended, whether to include a reduction of seat time in the definition, whether to specify the amount of online and face-to-face instruction, and whether to address pedagogical quality in the definition (Allen & Seaman, 2007; Graham, 2013; Picciano, 2009). In this paper, we will define BL as the combination of face-to-face and online instruction (Graham, 2013).

2.2. Faculty adoption research

While a number of scholars have explored faculty adoption of technology, much less has been published regarding faculty adoption of blended learning (Kaleta et al., 2007). Further, relatively few researchers have examined the factors that facilitate or impede faculty adoption of BL (Christo-Baker, 2004; Humbert, 2007). Scholars that have researched barriers to BL adoption include Humbert (2007). He surveyed 37 faculty members in France to identify barriers to their BL adoption. Faculty members reported concerns regarding decreasing the quality of student interaction, the lack of time to prepare online content and activities, and the difficulty of dealing with online interactions. In addition, Oh and Park (2009) surveyed 133 faculty members in Korea to determine potential barriers to BL adoption. Those barriers included heavy workloads, lack of motivation, and lack of financial support.

While relatively few studies examine faculty adoption of BL, a number of scholars have examined factors that influence faculty adoption of various types of educational technology (Findik & Ozkan, 2013; McCann, 2010; Mtebe & Raisamo, 2014; Ngimwa & Wilson, 2012; Swan, 2009; Zhou & Xu, 2007). Some of these studies examined barriers and facilitators of faculty technology adoption. Lin, Huang, and Chen (2014) surveyed and interviewed Chinese language teachers to identify barriers to the adoption of information and communication technology (ICT). Faculty reported that their greatest barriers included insufficient support and insufficient time for developing technology-driven pedagogy and activities. Beggs (2000) surveyed 348 U.S. faculty members regarding the extent to which certain factors would impede or facilitate their technology adoption. Barriers that the highest number of faculty rated as important to critically important included lack of time and lack of equipment. The facilitators that the highest number of faculty rated as important to critically important included improved student learning, advantage over traditional teaching, equipment availability, increased student interest, and ease of use.

2.3. Institutional BL adoption framework

We based our study on Graham et al.'s (2013) framework for institutional adoption and implementation of BL. Graham et al. used interview data from six institutions at various stages of adoption/implementation to identify key markers related to institutional strategy, structure, and support:

- *Strategy* includes issues regarding the overall design of BL (e.g., definition and policies, forms of advocacy, degree of implementation, purposes for implementation).
- *Structure* encompasses issues relating to the technological, pedagogical, and administrative framework facilitating the BL environment (e.g., governance, BL models, scheduling, and evaluation).
- *Support* involves issues relating to the manner in which an institution facilitates faculty implementation and maintenance of its BL design (e.g., technical support, pedagogical support, and faculty incentives).

Evidences for these three areas of consideration were identified and differentiated across three stages of institutional adoption/implementation:

- At *Stage 1* (awareness/exploration) an institution has not yet adopted a strategy regarding BL, but administrators are aware of and show limited support for individual faculty exploring ways in which they may employ BL techniques in their classes.
- At *Stage 2* (adoption/early implementation) an institution adopts a BL strategy and experiments with new policies and practices to support its implementation.
- At *Stage 3* (mature implementation/growth) an institution has well established BL strategies, structure, and support that are integral to its operation.

2.4. Rogers' diffusion of innovations

We also based our study on Rogers' (2003) diffusion of innovations framework. Rogers (2003) defined *diffusion* as "the process by which an innovation is communicated through certain channels over time among the members of a social system" (p. 5). As the innovation is communicated, social system participants choose whether to adopt it. Rogers grouped innovation adopters into five categories based on shared characteristics and values he had identified: innovators, early adopters, the EM, the LM, and laggards (Rogers, 2003). Subsequent scholars provided more detailed descriptions. Table 1 outlines characteristics of the five categories of innovation adopters based on the

Table 1
Characteristics of Rogers' five categories of innovation adopters.

Category	Characteristics
Innovators	They are the very first to adopt a new innovation. They represent approximately 2.5% of the adopters. They aggressively pursue new technology products and may make a purchase simply to explore a technology's features. They have substantial technical expertise and maintain connections with sources of innovations.
Early adopters	They are next to adopt new innovations. They represent approximately 13.5% of adopters. They have a level of technical expertise and investigate new technologies; however, they adopt innovations with greater discretion than innovators. Because of their discretion, early adopters serve as examples and opinion leaders for others contemplating adoption.
Early majority (EM)	They adopt at varying times after the early adopters but before the average adopter. They represent approximately 34% of adopters. They are fairly comfortable with technology, but they only adopt new innovations when they have compelling evidence of its value and solid recommendations from other adopters.
Late majority (LM)	They adopt innovations after the EM. They represent approximately 34% of adopters. They are typically less comfortable with technology than the EM and require support. They adopt an innovation only when peer pressure and necessity compel it.
Laggards	They are the last to adopt an innovation. They represent approximately 16% of adopters. They express aversion to technology and resist adopting new innovations even after necessity prompts adoption.