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Institutional Adoption of Blended Learning in Higher Education

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Doctor of Philosophy

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ABSTRACT

Institutional Adoption of Blended Learning in Higher Education

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Relatively little research on blended learning (BL) addresses institutional adoption in higher education. Graham, Woodfield, and Harrison (2012) proposed a framework for institutional BL adoption, 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 series of articles, the authors applied that framework to institutions of higher education implementing BL.

In the first article, the authors applied the framework to 11 *Next Generation Learning Challenge* (NGLC) grant recipients transitioning from Stage 1 to Stage 2 of BL adoption. The authors compared U.S. institutional strategy, structure, and support approaches to BL adoption and identified patterns and distinctions.

In the final two articles, the authors applied the framework as well as Rogers' (2003) diffusion of innovations theory to determine the degree to which and why institutional strategy, structure, and support measures would facilitate or impede BL adoption among higher education faculty. The authors also explored whether faculty's innovation adoption category would affect which measures facilitated or impeded BL adoption. To achieve these objectives, the authors surveyed and interviewed faculty at BYU-Idaho (BYU-I). In the second article, the authors reviewed the survey results to determine (a) the appropriate innovation adoption category for each faculty member and (b) the factors that impacted faculty decisions to adopt BL. In the third article, the authors reviewed the results of the interviews to identify why participants reported strategy, structure, and support decisions would impact their decision to adopt BL.

Keywords: post-secondary education, blended learning, hybrid courses, faculty adoption, institutional adoption, higher education policy

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DESCRIPTION OF RESEARCH AGENDA AND STRUCTURE OF THE DISSERTATION

While many studies have investigated blended learning (BL) effectiveness at the course level, very few studies have provided guidance for adoption and implementation of BL at the institutional level (Graham, Woodfield, & Harrison, 2012). Accordingly, the three research articles in this dissertation explore administrative and faculty perspectives relating to the institutional adoption of BL. These three articles have the following objectives:

1. Identify and provide details about key issues that institutional administrators should be aware of in order to guide their institutions towards successful adoption and implementation of BL.
2. Identify key markers related to institutional strategy, structure, and support that would allow institutions to gauge the progress they are making towards institutionalizing BL.

Article One

In the first article—Blended Learning in Higher Education: Institutional Adoption and Implementation—we applied Graham et al.'s (2012) institutional adoption framework to 11 universities participating in a *NGLC* grant. NGLC grants are awarded to applicants who propose technology-enabled innovations to promoting college readiness and completion. The institutions participating in this NGLC grant were attempting to transition from an awareness/exploration of BL to the adoption/early implementation phase. The study compared the institutions' strategy, structure, and support approaches to BL adoption and identified patterns and distinctions.

In that study, we conducted semi-structured telephone interviews with administrators at the 11 institutions who had substantial first-hand knowledge and experience regarding the institution's stance on and relative implementation of BL policies. Notably, administrators

included the number of faculty adopters among the primary indicators of the institutions' success in adopting BL. Because of faculty members' crucial role in institutional adoption, we concluded the article with a recommendation that future research examine the perspectives of faculty members regarding institutional strategy structure, and support decisions.

Article Two

In the second article, we explored how Graham et al.'s (2012) institutional strategy, structure, and support decisions influence faculty members' decision to adopt BL. We also applied Rogers' (2003) diffusion of innovations theory to determine the degree to which institutional strategy, structure, and support measures facilitated or impeded BL adoption among higher education faculty. Specifically, we explored whether higher education faculty's innovation adoption category (innovator, early adopter, early majority, late majority, or laggard) affected which measures facilitated or impeded BL adoption. To achieve this objective, we surveyed 214 faculty members at BYU-Idaho.

Article Three

In conjunction with this study, we also conducted semi-structured interviews with 39 of the survey respondents at BYU-Idaho belonging to the early and late majority to determine why the factors they identified would influence their BL adoption decision. We focused on interviewing the early and late majority because Rogers (2003) identified those two groups as those most likely to adopt an innovation based on external influences, such as peer recommendations or social necessity. Since our intended audience included those facilitating BL adoption among faculty at their institutions, concentrating our findings and conclusions on these two groups seemed most logical.

Originally, we intended to report the results of the survey and the interviews in a single article; however, to meet the word count requirements of potential avenues of publication, we separated the article into two segments.

Journal Submission

Computers & Education (acceptance rate=24%, ISI impact factor [2013]=2.461, publish or perish h5-index=72) has agreed to publish our first article (Porter, Graham, Spring, & Welch, 2014). The second and third articles have been submitted to journals for review. To identify journals to which we would submit our articles, we considered the rigor, impact, and prestige (West & Rich, 2012) of various education technology journals as well as their review time, word count, and whether our article's subject matter aligned with the journals' scope and aims.

Contribution

I acted as first author on the articles submitted in this dissertation. I played a primary role in the design, development, and execution of the ideas set forth. I oversaw the contributions of other authors and made final decisions regarding the materials included.

Blended Learning in Higher Education: Institutional Adoption and Implementation

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Abstract

Relatively little of the current research on blended learning (BL) addresses institutional adoption issues. Additional research is needed to guide institutions of higher education in strategically adopting and implementing blended learning on campus. The authors conducted a prior study in which they 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. The current study applies this adoption framework to 11 U. S. institutions participating in a Next Generation Learning Challenge (NGLC) grant and attempting to transition from an awareness/exploration of BL to the adoption/early implementation phase. The study also compares U.S. institutional strategy, structure, and support approaches to BL adoption and identifies patterns and distinctions.

Keywords: post-secondary education; distance education and telelearning; teaching/learning strategies

Introduction

Institutions of higher education are increasingly adopting blended learning (BL), the combination of face-to-face and technology-mediated instruction. In 2002, the editor of *The Journal of Asynchronous Learning Networks* predicted that approximately 80-90% of higher education courses would become blended in the future (Young, 2002). By 2004, scholars reported that 45.9% of U.S. undergraduate institutions already offered blended courses (Allen, Seaman, & Garrett, 2007). In 2011, scholars noted the "explosive growth of blended learning" and acknowledged BL's potential to become the "new normal" in higher education (Norberg, Dziuban, & Moskal, 2011, pp. 207-08).

While a number of scholars have conducted course-level investigations of BL's effectiveness, very few have provided guidance for BL adoption at the institutional level. Accordingly, Graham, Harrison, and Porter (2012) examined a purposive sample of six U.S. institutions of higher education at various stages of BL adoption and proposed a framework to assist administrators to effectively implement BL. The framework identified three stages of blended learning adoption (see Table 1), as well as key strategy, structure, and support issues universities may address at each stage (see Table 2).

Table 1

BL Implementation Stages Summarized from the BL Adoption Framework.

Stage	Description
Stage 1: Awareness/exploration	Institutional awareness of and limited support for individual faculty exploring ways in which they may employ BL techniques in their classes
Stage 2: Adoption/early implementation	Institutional adoption of BL strategy and experimentation with new policies and practices to support its implementation
Stage 3: Mature implementation/growth	Well-established BL strategies, structure, and support that are integral to university operations

Table 2

BL Implementation Categories Summarized from the BL Adoption Framework.

Theme	Description
Strategy	Addresses issues relating to the overall design of BL, such as definition of BL, forms of advocacy, degree of implementation, purposes of BL, and policies surrounding it
Structure	Addresses issues relating to the technological, pedagogical, and administrative framework facilitating the BL environment, including governance, models, scheduling structures, and evaluation
Support	Addresses issues relating to the manner in which an institution facilitates the implementation and maintenance of its BL design, incorporating technical support, pedagogical support, and faculty incentives

Graham et al. (2012) noted that "many institutions of higher education that are in the awareness/exploration stage would like to transition to adoption/early implementation" (p. 11) and recommended conducting future research on this transition. Accordingly, this study examines U.S. institutions of higher education that are transitioning between the first and second stages of adoption in order to achieve the following research goals:

1. Identify institutional strategy, structure, and support markers that would allow administrators to determine their progress in transitioning from awareness and exploration of BL to adoption and early implementation
2. Identify and provide details about issues administrators should address in order to successfully facilitate their institution's transition from awareness and exploration of BL to adoption and early implementation

Literature Review

This literature review explores scholarship regarding institutional BL adoption, specifically focusing on scholars' recommendations for implementation. The review is based on the BL adoption framework with minor adaptions due to this article's objectives. For example, the BL framework combined its analysis of infrastructure, professional development, technical support, and pedagogical support. We chose to emphasize each aspect's importance in initial adoption efforts by analyzing them separately. We also combined BL definition and policy into a single category since those were largely synonymous here. Also, we eliminated implementation as a separate category since this article specifically focuses on institutional BL implementation. The review is organized by the three categories of issues identified by the BL adoption framework: strategy, structure, and support.

Strategy

Purpose. Institutions implementing BL should identify the goals they intend to achieve (Moskal, Dziuban, & Hartman, 2013). Graham, Allen, and Ure (2005) cited three general purposes for BL adoption: (a) enhanced pedagogy, (b) increased access and flexibility, and (c) improved cost-effectiveness and resource use.

BL may provide pedagogical benefits such as increased learning effectiveness, satisfaction, and efficiency (Garrison & Kanuka, 2004; Graham, 2013). The University of Central Florida (UCF) conducted a multi-year study examining the success rates of tens of thousands of their face-to-face, BL, and online students. UCF defined *success* as earning at least a C- grade, and the study considered college, gender, and modality. UCF reported that the success rates for BL were higher within each college than either fully face-to-face or fully online courses for both males and females (Dziuban, Hartman, & Moskal, 2004; Graham, 2013).

BL has also demonstrated potential to increase access and flexibility (Graham, 2006; Moskal et al., 2013; Wallace & Young, 2010). Specifically, BL provides students with increased access to higher education offerings while providing institutions greater access to student populations (Piper, 2010; Shea, 2007; Vaughan, 2007). BL also affords teachers and students enhanced temporal and geographic flexibility, allowing them to determine when and where online segments of instruction occur (King & Arnold, 2012; Sharpe, Benfield, & Francis, 2006).

In addition, BL may facilitate economic goals such as improved cost effectiveness and resource use (Graham, 2013; López-Pérez, Pérez-López, & Rodríguez-Ariza, 2011; Moskal et al., 2013). For example, BL delivery models may feature lower operating costs than face-to-face models (Vaughan, 2007). While operating costs vary among implementation models, Battaglino, Haldeman, and Laurans (2012) determined that the overall per-pupil expenditures to implement BL in a K-12 environment are significantly lower than the national average for traditional brick-and-mortar schools. In addition, BL facilitates increased enrollment and enhanced use of physical facilities by requiring less seat time than fully face-to-face courses and enabling higher student retention than fully online courses, thus decreasing time for completion of degrees (King & Arnold, 2013; Niemiec & Otte, 2010).

Institutional advocacy. Successful BL implementation requires advocacy among administrators, faculty, and other institutional personnel (O'Dowd, 2013; Taylor & Newton, 2012). Administrative advocates contribute to developing a shared vision for BL implementation, extending communication, and locating necessary funding and other resources (Garrison & Kanuka, 2004; Vaughan, 2007). Faculty, support staff, and even student advocates provide cooperation and enthusiasm that may facilitate implementation (Donnelly, 2010; Moskal et al., 2013). Advocates can collaborate through exploratory discussion groups, consultations, and designated partnerships (Niemiec & Otte, 2010; Vaughan, 2007).

Definition. Creating an institutional definition of BL can facilitate a number of important objectives, which include distinguishing BL courses from other delivery methods for scheduling purposes, providing students with clear and reliable expectations regarding BL courses, and developing appropriate support strategies (Niemiec & Otte, 2010; Taylor & Newton, 2012). Toth, Foulger, and Amrein-Beardsley (2008) asserted that while formulating an institutional definition does not necessarily require all instructors to follow identical procedures, collaboration should facilitate a level of consistency. Garrison and Vaughan (2013) noted that the definition should be more inclusive than restrictive. In addition, Moskal et al. (2013) argued that an institution should align its BL definition with its objectives while remaining consistent with organizational capacity.

Structure

Infrastructure. Establishing necessary technological infrastructure is central to the success of BL implementation (Niemiec & Otte, 2010). Researchers have identified critical administrative decisions, including the decision to invest in necessary technologies and to ensure that those technologies are easy to use.

Institutions seeking to implement BL must provide the core technological infrastructure required for an effective course management system that is user friendly for faculty and students (Liu & Tourtellot, 2011; Taylor & Newton, 2012). Quality servers are also crucial, as is sufficient bandwidth to enable the increased online activity that accompanies BL coursework (Carbonell, Dailey-Hebert, & Gijselaers, 2013). Although investments in technological infrastructure may add significantly to the costs of BL implementation, the average per-pupil costs of BL are significantly lower than the costs of traditional classroom education (Battaglino et al., 2012). Additionally, the costs of educational technology continue to decrease over time (Salmon, 2005; Schneider, 2010).

Scheduling. Prior to each semester, institutions should coordinate and clearly communicate the scheduling of blended courses (Niemiec & Otte, 2010), apprising students before registration which courses are blended (Toth et al., 2008). Doing so enables students to identify and prepare for courses that match their learning preferences, goals, and schedules (Toth et al., 2008).

Governance. Institutions implementing BL should determine who approves the development of BL courses and who owns intellectual property rights to materials created for them (Moskal et al., 2013), including matters of accessibility (Graham et al., 2012). Niemiec & Otte (2010) noted that universities may simply adapt and specify existing policies to address BL implementation.

Evaluation. Evaluation of BL initiatives afford the ongoing feedback essential to continual improvement (McGee & Reis, 2012; Taylor & Newton, 2012). Niemiec and Otte (2010) listed evaluation as one of the "indispensable essentials" of BL adoption. Systematic, longitudinal data collection is important for effective evaluation (Dziuban & Moskal, 2011; Toth

et al., 2008). However, many institutions struggle to implement even basic evaluations; thus researchers have sought to explain the causes for this difficulty and to propose ways that evaluations should be conducted.

Also, the quality of BL assessments can be increased by triangulating the data through the use of multiple data sources, including student course evaluations, student demographic data, student performance data, faculty seminars, informal discussions, and course assessment surveys (Garrison & Kanuka, 2004; Sharpe, et al., 2006). Graham and Dziuban (2007) noted that as a BL initiative matures, assessments and evaluations will move from being "objective, non-contextual, and inauthentic" to "interpretive, contextual, and authentic."

Despite their importance, many institutions struggle to implement evaluations (Sharpe, Benfield, Roberts, & Francis, 2006; Taylor & Newton, 2012). Marshall (2010) noted that some institutions have not yet developed a "culture of systematic self-improvement" "—a weakness that can lead them to treat evaluation and assessment as an afterthought (Niemiec & Otte, 2010). Sharpe et al. (2006) suggested one explanation. For many institutions, "the pressure is to maintain and deliver services rather than to judge their effectiveness, i.e., to implement rather than evaluate." Sharpe et al. (2006) stated that an increase of funding for BL initiatives may redirect pressure on quality evaluation in order to satisfy funders' need to see returns on their investments.

Professional development. Researchers and practitioners regard professional development as crucial because many faculty members need to develop new technological and pedagogical skills to teach in a blended format (Martin, 2003; Matzat, 2013; Owens, 2012). Faculty must have the technological skills necessary to design and maintain the online portions of each course (Martin, 2003; Toth et al., 2008). Pedagogical skills are necessary to fully

investigate the wide variety of instructional methods unique to blended learning (Korr, Derwin, Greene, & Sokoloff, 2012). When institutions do not provide sufficient opportunities for professional development, many faculty members will likely fail to fully embrace a blended format, and will instead replicate their conventional teaching methods (Al-Sarrani, 2010; Garrison & Vaughan, 2013).

Support

Technical and pedagogical support. After completing a professional development course, faculty may benefit from continued assistance as they incorporate BL instructional design principles and practices into their courses (Garrison & Kanuka, 2004; Martin, 2003). In addition, they require technical support as they produce, edit, and distribute materials for their BL courses (Taylor & Newton, 2012). Students likewise require technical assistance (Garrison & Kanuka, 2004; Wu, Tennyson, & Hsia, 2010). Those who have not mastered the required technical skills will be disadvantaged in accessing course materials, engaging with course content, and otherwise participating in BL courses (Toth et al., 2008). Moskal et al. (2013) noted that support may occur in person or by telephone, via instant messaging or e-mail, or on a website containing tutorials and other instructional materials, preferably using multiple methods.

Institutional incentives. In addition to continuing technological and pedagogical assistance, institutions can also support faculty by providing them with the time and the motivation to develop and implement BL courses (Carbonell et al., 2013). Faculty require adequate time to redesign courses, learn new technologies, and obtain necessary equipment (Garrison & Vaughan, 2013; Martin, 2003). Institutions may provide this time by apportioning release time, increasing the weight of BL courses in workload calculations, or allowing faculty to hire teaching assistants (Garrison & Vaughan, 2013; Wallace & Young, 2010).

Institutions may motivate otherwise reluctant faculty to adopt BL by providing financial incentives (Martin, 2003) such as workload compensation, BL implementation stipends, or financing for technological equipment (Korr et al., 2012; Martin, 2003). Institutions may also demonstrate their approval and support by considering BL implementation in matters of tenure and promotion (Bolliger & Wasilik, 2009; Carbonell et al., 2013).

Method

The purpose of this research was to examine issues surrounding the adoption and early implementation of BL policies in institutions of higher education. Specifically, researchers sought to offer insights for administrators and others seeking to facilitate an institutional transition from BL awareness and exploration to its adoption and early implementation. To attain this research objective, we used a case study approach (Yin, 2003), a methodology appropriate for scrutinizing a hypothesis regarding a class of people, organizations, programs, or policies by examining a specific case from that class (Merriam, 1998).

Case Selection

To obtain insights into the institutional transition from BL awareness and exploration to BL adoption and early implementation, the researchers obtained a purposive sample. Specifically, they identified institutions at the adoption and early implementation stage that received a NGLC grant in 2011 to facilitate blended learning development at their institutions.

In 2011, the American Association of State Colleges and Universities (AASCU) and the University of Central Florida (UCF) received an NGLC grant to facilitate the adoption of BL at 20 institutions of higher education. UCF facilitated BL adoption at participating institutions by holding a seminar to share BL design and delivery strategies, BL models, assessment and data collection protocols, and workshop/training materials. AASCU used its conferences and

networks to collaborate with the 20 institutions implementing BL. In addition, UCF hosted six live webinars and provided various implementation recommendations through its online Blended Learning Toolkit. Of the 20 participating institutions, 11 agreed to report the results of their BL implementation for the purposes of this study. Table 3 provides basic demographic information about each of the 11 reporting institutions, taken from The Carnegie Classification of Institutions of Higher Education.

Table 3

Case Demographics Adapted from The Carnegie Classification of Institutions of Higher Education ("The Carnegie classification," 2010.)

				Carnegie Classification			
Institution	Abbreviation	Control	Students	Enrollment Profile	Size	Setting	Type
Missouri State University	MSU	Public	20,371	High undergraduate	Large four-year	Primarily residential	Master's Colleges
Thomas Edison State College	TESC	Public	18,206	Very high undergraduate	Medium four-year	Primarily nonresidential	Master's Colleges
St. Cloud State University	SCSU	Public	18,123	Very high undergraduate	Large four-year	Primarily nonresidential	Master's Colleges
University of Missouri-St. Louis	UMSL	Public	16,534	High undergraduate	Medium four-year	Primarily nonresidential	Master's Colleges
Southeast Missouri State University	SEMO	Public	10,801	Very high undergraduate	Medium four-year	Primarily residential	Master's Colleges
Northwestern State of Louisiana	NSUL	Public	9,247	Very high undergraduate	Medium four-year	Primarily nonresidential	Master's Colleges
State University of New York	SUNY	Public	8,490	High undergraduate	Medium four-year	Primarily residential	Master's Colleges
Columbus State University	CSU	Public	8,178	High undergraduate	Medium four-year	Primarily nonresidential	Master's Colleges
Fayetteville State University	FSU	Public	6,283	Very high undergraduate	Medium four-year	Primarily residential	Master's Colleges
Grambling State University	GSU	Public	4,992	Very high undergraduate	Medium four-year	Primarily residential	Master's Colleges
Indiana University	IUK	Public	2,992	Very high undergraduate	Medium four-year	Primarily nonresidential	Baccalaureate Colleges

While participating institutions did not report precise data regarding the extent of BL adoption at their schools, nearly all participating institutions reported using NGLC funds to launch BL adoption among approximately 5-27 classes. SMSU and IU were the exception to this trend, using grant funds to facilitate development among and add to their growing number of BL adopters, ultimately reporting adoption in hundreds of courses.

Data Collection

In the fall of 2012, researchers conducted 45-65-minute semi-structured telephone interviews with administrators and other implementers at the 11 reporting institutions. Interviewees possessed substantial participant knowledge and experience regarding the institution's current implementation of BL. They included associate provosts, deans, directors of distance learning programs, the director of one institution's Center for Teaching and Learning, and others overseeing and participating in BL initiatives at their respective institutions. Interviewees also provided links to their institutions' online policies and resources regarding BL. All interviews were recorded and transcribed. The interview protocol used is included as Appendix A.

Data Analysis

The researchers reviewed, analyzed, and compared the data contained in the interview transcripts to identify themes, patterns, and tentative categories regarding the various issues regarding BL implementation (Lincoln & Guba, 1985). The authors sought to ensure trustworthiness of the qualitative inquiry by observing standards of credibility and transferability (Lincoln & Guba, 1985).

To sustain credibility, the authors engaged in triangulation by referring to multiple sources of information, which included pertinent literature, semi-structured interviews, and

institutional documents. After compiling relevant data, they employed member checking as they asked interviewees to review and verify the accuracy of the authors' work. In addition, the authors debriefed with peers to obtain and implement feedback regarding their research. To promote transferability—the readers' ability to apply findings from one context to other contexts or settings—researchers provided contexts by giving accurate institutional data and rich descriptions of the themes.

Findings

Interviewees from the 11 institutions that received NGLC grants described how they addressed strategy, structure, and support issues during the transition from the awareness and exploration stage to the adoption and early implementation stage. Table 4 outlines the themes discussed in the Findings section under the categories of strategy, structure, and support.

Table 4

Summary of Strategy, Structure, and Support Themes Discussed in the Findings.

Theme			**Explanation**
Strategy	*Purpose*	Pedagogy	Pedagogical goals focused on enhancing student experiences and learning outcomes.
		Flexibility & Access	Logistical purposes aimed to increase course access and expanded temporal and geographical flexibility.
		Cost Effectiveness	Financial objectives included increasing enrollment and/or maximizing use of physical facilities.
	Advocacy	Administration	The President, Vice President, Provost, or other administrators mandated or encouraged BL.
		Department/College	The Dean, Associate Dean, or other college/department administrators mandated or encouraged BL.
		Faculty Resource Center	Centers for Teaching & Learning and/or Offices of Information Technology promoted BL.
		Distance Learning	Distance learning organization promoted BL.
		Faculty/Students	Faculty and their students practiced and promoted BL.
	Definition	General	Universities defined BL generally as the mixture of online and F2F instruction.
		Enumerated	Universities' BL definition enumerated the quantity of online and F2F instruction required.
Structure	*Infrastructure*	Initial Adoption	Universities deemed existing technological infrastructure adequate for an initial group of BL adopters.
		Scaled Adoption	Universities upgraded their servers/bandwidth to accommodate the increased quantity of BL adopters and online materials.
	Scheduling	No Indication	Course catalogs did not indicate whether a class was blended or F2F.
		Basic Indication	Course catalogs indicated whether a class is blended or F2F.
		Detailed Indication	Instructors communicated the schedule of F2F and online classes during the semester.
	Governance	University Level	University-level administrators approved BL courses.
		Departmental Level	Department-level administrators approved BL courses.
		Faculty Resource Level	Faculty resource centers approved BL courses.
		Faculty Level	Faculty members redesigned their courses without formal approval.
	Evaluation	Preexisting Only	No evaluation of BL courses was conducted beyond administration of standard, preexisting evaluations.
		Informal Evaluation	BL courses were informally evaluated during meetings with BL adopters.
		Course Statistics	Institutions used course statistics such as enrollment, retention, and grades to evaluate BL courses.
	Professional Development	One-On-One Training	BL adopters received individual technical and pedagogical training.
		Seminars/Workshops	BL adopters received training during online or F2F seminars, workshops, or other group presentations.
		BL Courses	BL adopters received technical and pedagogical training during a series of group training sessions.
		Online Training	BL adopters received training through online professional development modules,
Support	*Support*	Technical	New technical support organization(s) and services provided mainly for faculty at schools with sufficient resources and/or BL adopters.
		Pedagogical	New pedagogical support organization(s) and services were provided for faculty at schools with sufficient resources and/or BL adopters.
	Incentives	Financial	Course development stipends or other compensation were offered to BL adopters.
		Load Reduction	Load reductions or release time were offered to BL adopters.
		Tenure/Promotion	Tenure/promotion consideration was given to BL adopters.

Strategy

Purpose. We asked the universities surveyed to identify their purpose for implementing BL. Institutions cited improved pedagogy, access and flexibility, and cost effectiveness. Nine of the universities reported improved pedagogy as a primary purpose for adopting BL. MSU and SCSU hoped to improve student learning outcomes. GSU noted implementing BL to "introduce new practices to the students and to ensure that we provide the best learning environment using the different learning modalities." NSUL stated, "There are a lot of other good things that are happening because of blended learning, but the core is creating a better experience for [students]."

Nine institutions identified temporal and/or geographic access and flexibility as benefits of BL. Temporal access and flexibility benefited SEMO education students who were simultaneously completing field experiences and coursework. The reduced class time also enhanced course access for students in general, allowing them to "potentially take two classes at the same time slot."

Additionally, six institutions appreciated increased access and flexibility for specific groups of students. MSU, SUNY, FSU, and IUK identified geographic and temporal access and flexibility for adult learners as an important objective. During winters, rural students at NSUL and some campuses of SUNY benefited particularly from BL's geographical access and flexibility.

Institutions also noted they found BL cost effective. FSU and IUK expressed optimism that BL would attract additional students to their universities. UMSL hoped to increase its student retention. Administrators at FSU noted that classroom space had been a long-standing

issue and explained that "blended is one obvious way of getting more utilization out of [our] facilities."

Institutional advocacy. We asked participants to identify the primary advocates for BL adoption—individuals who actively promoted BL and organized implementation efforts, including institutional administrators, departmental administrators, resource centers, faculty, or a combination of at least two of the four. Six institutions identified specific BL advocates among their central administration, including the president, provost, vice president for academic affairs, associate provost for student success, associate provost for student development and public affairs, and vice president of technology. Four universities identified their institutional administrators as "advocates." UMSL added that the NGLC grant would not have occurred without its provost. In addition, SCSU reported that its provost committed the school to implement BL and organized a team to receive training available through the NGLC grant.

TESC, UMSL, FSU, and GSU identified departmental administrators as BL advocates. Each institution focused its NGLC-sponsored implementation efforts on courses within the advocates' department or college. The administrators at all four acted as primary drivers in BL implementation.

Seven universities featured advocates among faculty resource centers. UMSL, SEMO, and IUK identified their Centers for Teaching and Learning as advocates. SEMO also noted the support of its Office of Information Technology. IUK's and TESC's adult learning programs became involved in BL implementation. FSU's director of online learning, GSU's director of distance learning, and CSU's distance learning design and delivery personnel likewise facilitated BL adoption.

While all participating universities featured initial faculty adopters, three of them specifically identified faculty as major drivers in implementing BL. SUNY reported that BL adoption "evolved from faculty." Similarly, MSU categorized faculty as "the main drive" for adoption. At CSU, an associate professor led efforts related to the NGLC grant and recruited several other faculty members to implement BL. Two other participants identified the key roles of the faculty in supporting the advocates. UMSL asserted its "huge commitment to faculty governance" and noted that BL adoption "couldn't have happened" without the faculty. NSUL emphasized the importance of recruiting "a few key faculty that are innovators" to facilitate BL adoption.

Definition. We asked institutions whether and how they defined BL. Each of the institutions surveyed cited an institutional working definition. Each definition included the combination of online and face-to-face instruction, but definitions varied in specificity. SCSU intentionally adopted a broad definition of BL, requiring that technology "have a fundamental and integral impact on our pedagogical approaches." UMSL gave its departments oversight regarding the specific portion of online and face-to-face activities BL courses offered. TESC offered the practical definition of "adding face-to-face content" to their online courses. SUNY defined BL courses as those "in which there is a significant blend of online instruction and face-to-face student instruction/interaction with faculty"; this definition also specified a reduction in seat time.

Seven institutions specified a percentage of instruction that should occur online for the course to qualify as blended (see Table 5). Each participant noted the flexibility teachers maintained to operate their blended courses outside the recommended percentile parameters when circumstances were appropriate.

Table 5

Quantity of Online Instruction Required for a Course to Qualify as Blended

School	Standardized percentage of online instruction
CSU	at least 35%
FSU	up to 50%
GSU	50%
IUK	50%
NSUL	50-99%
MSU	30-70%
SEMO	Light:1-24%, Moderate: 25-75%, Heavy: 76-99%

Structure

Infrastructure. We asked the institutions whether they enhanced their infrastructure to facilitate BL adoption. SEMO reported enhancing its technological infrastructure by upgrading the bandwidth on its main campus and tripling the bandwidth on its regional/satellite campuses "because of the increased amount of material, particularly graphics and video . . . that relates to online and blended" learning. Online and blended students likewise benefitted when SEMO upgraded its server and purchased additional software. TESC reported expanding its physical infrastructure because its fully online courses integrated BL by adding face-to-face instruction. To facilitate such instruction, TESC secured access to classrooms at a local military base.

In contrast, nine institutions elected to avoid changing their infrastructure. Three universities did not require infrastructure enhancements. SUNY and FSU already had the infrastructure required for their current levels of BL implementation. Likewise, IUK reported that it currently featured sufficient infrastructure.

The six remaining institutions focused on adopting new technologies to facilitate BL adoption. NSUL and UMSL implemented online collaboration tools to facilitate out-of-class communication. CSU utilized multimedia delivery software to make course videos available.

GSU switched to a new learning management system. SCSU recorded professors' lectures to facilitate "flipping" the classrooms. MSU purchased customized textbooks and hand-held clickers.

Scheduling. We asked universities whether they identified BL courses in their course catalogs. Eight of the institutions systematically did so. Two of the eight reported that they also provided specific information about each blended course. For example, SEMO used the course catalog to indicate to students whether a course used a light, moderate, or heavy blend. SUNY offered in the course catalog a full semester calendar of face-to-face and online meeting times for each course.

Three institutions did not systematically identify blended courses in their course catalogs. CSU allowed individual instructors to indicate BL courses in the catalog but did not create a systematic protocol for indicating all BL courses. SCSU used both e-mail and verbal notifications to inform students, and FSU informed students on the first day of class if a course was blended. Both CSU and FSU noted that they had plans to systematically indicate BL in course catalogs once they had completed the pilot phase.

Governance. We asked universities to indicate who had the authority to approve BL courses. Ten of the eleven institutions identified department administrators. In addition to department approval, NSUL also required approval from the provost's office, and SUNY had an instructional designer sign off on the course redesign. In contrast, CSU instructors could implement BL courses without formal approval.

Evaluation. We asked the universities to describe their processes for evaluating BL courses. MSU, TESC, UMSL, SEMO, SUNY, CSU, GSU, and IUK used their existing course evaluations for their BL courses. NSUL did not report any evaluation of BL courses.

Three institutions reported that they created additional evaluations specific to their BL courses. TESC tracked enrollment rates and sought feedback from instructors regarding their experiences. Faculty members at SCSU met repeatedly to evaluate and discuss their BL courses and scheduled additional evaluations for the end of the semester to inform their BL course designs for future semesters. FSU evaluated their BL courses by extracting and aggregating course data from their course management system.

Professional development. We asked institutions whether they offered professional development to faculty adopting BL. All 11 institutions provided at least one form of professional development.

Eight universities provided presentations, seminars, or webinars to faculty adopting BL. Five of the eight facilitated faculty participation in live workshops and/or webinars for NGLC grant recipients. Five of those eight institutions regularly offered workshops discussing BL. Three universities reported addressing BL at faculty orientation or other university-wide faculty development events.

Four institutions reported offering faculty a BL course design series. GSU required BL instructors to obtain a "hybrid instructor certification" by becoming Moodle certified and attending a three to four week training session. BL adopters at UMSL had the option of attending "Online in Nine," a nine-week course redesign series, and CSU offered a similar two-week course. MSU condensed its BL technology training into a two-day "boot camp" for a department.

In addition, five universities tailored their professional development to meet BL implementers' needs. For example, MSU faculty featured varying levels of BL expertise, so the university created an online BL training program, "Digital Professor Academy." The program

consisted of a selection of online training units that provided instructors with as little or as much training as they needed.

Support

Technical and pedagogical support. We asked universities whether they provided technological and/or pedagogical support to BL adopters. MSU, FSU, IUK, and TESC offered robust pre-existing technological and pedagogical support systems and elected not to add BL-specific support. TESC explained that incorporating face-to-face instruction into online courses required no additional technological or pedagogical support, since its instructors were not learning new technological skills and were "well-versed" in face-to-face instruction. Under similar reasoning, FSU focused its initial implementation efforts on "instructors who [had] already developed online courses."

Five universities offered specific technological support for BL implementers. SUNY's Library, Information, and Technology Services added a 24/7 online help desk for faculty and students. CSU's and GSU's distance learning organizations extended their distance learning support to BL. For example, GSU reported offering general technical support and Moodle training and consultations. SEMO's Office of Information Technology supported BL. NSUL created an "angel team" that included five to six employees with technological support capability.

Seven institutions offered pedagogical support for BL adopters. NSUL's angel team provided pedagogical as well as technical support. CSU's Distance Learning Support Group provided faculty brown bag lunches, webinars, and course improvement workshops. Similarly, SUNY featured ongoing faculty seminars, and its Center for Excellence in Learning and Teaching hosted weekly faculty workshops. Faculty who received BL training from

instructional designers at GSU's Office of Distance Learning or SEMO's Office of Information Technology could request assistance during BL implementation. In addition, SEMO's Center for Teaching and Learning provided year-round workshops and addressed individual requests for assistance. Student-focused pedagogical support included tutoring services from math and writing centers at UMSL as well as English Department graduate student mentors and writing tutors at SCSU.

Institutional incentives. Five universities offered formal incentives to first-time adopters. MSU, UMSL, and IUK provided course development stipends in amounts ranging from $1,950 to $3,000. SCSU's departments offered their faculty varying incentives, including stipends for those recording lectures to facilitate a flipped classroom design. CSU provided $1,000 in place of an iPad they previously offered to initial adopters. MSU's psychology department weighed BL courses more heavily in course load calculations and provided undergraduate and graduate student assistants in a larger class.

The other six universities did not choose to formally incentivize faculty. NSUL motivated faculty to adopt BL by highlighting BL's improved pedagogy and flexibility. SEMO emphasized the flexibility resulting from BL's reduction of class time. TESC located a small group of adventurous faculty willing to attempt BL adoption without any formal incentive. BL adopters in FSU's freshman seminar, math, and English classes already featured substantial work online. Similarly, SUNY implemented BL due to student and faculty demand, so they considered incentives unnecessary.

Discussion

Each section below discusses an important finding from the research. Table 6 summarizes conclusions we reached based on the findings.

Table 6

Summary of Institutional BL Implementation Conclusions Organized by BL Adoption Framework Categories.

Theme		Conclusion
Strategy	*Purpose*	Institutions should align their purposes for adopting blended learning with both institutional and faculty goals and values.
	Advocacy	Institutions should identify and develop advocates at multiple institutional levels, including school and department administrations, faculty resource centers, faculty members, and students.
	Definition	Institutions should publish a uniform definition of BL that designates BL's structural dimensions such as the integration of face-to-face and online instruction. Faculty should retain the flexibility to make pedagogical decisions regarding their BL course redesign.
Structure	*Infrastructure*	Institutions should prepare to scale initial BL adoption efforts by upgrading their servers, bandwidth, and other infrastructure.
	Scheduling	Institutions should clearly designate their BL offerings in their course catalogs in a way that accurately reflects any consistent reductions in seat time.
	Governance	BL governance should involve institutional and department administrators as well as faculty input.
	Evaluation	Institutions should establish evaluations based on common course evaluations, assessments, and outcomes in traditional and BL classes.
	Professional Development	Institutions should consider a number of variables when selecting their professional development delivery methods, including potential training providers, the quantity of adopters that require training, and participants' needs.
Support	*Support*	Institutions should determine both faculty and student BL adopters' support needs and satisfy them.
	Incentives	Institutions should consider providing incentives to BL adopters such as financial compensation, additional time for adoption, or taking BL adoption into consideration during tenure and promotion.

Strategy

Purpose. The purposes the universities reported for implementing BL aligned with those reported in the literature: pedagogical improvement, increased access and flexibility, and cost effectiveness (Graham et al., 2005). While the overall categories aligned, the institutions' tailored their specific goals to their institutional needs and aims. FSU noted that those determining BL objectives should make certain "they are appropriate to whatever your institution is and whatever your programs are and whoever your students are."

In addition to aligning BL adoption objectives with institutional goals, implementers may consider that university personnel may have different purposes for adopting BL. For example, administrators, tasked with the financial success of the institution, may focus on increasing enrollment and retaining students, while faculty may focus on BL's flexibility and pedagogical benefits. To succeed, an institution should identify and address the objectives of all stakeholders.

Notably, the identity and location of BL stakeholders has the potential to change aspects of higher education courses adopting BL. For example, several of the institutions studied specifically used BL's temporal and geographical flexibility to target nontraditional and geographically distant students. If other institutions follow this trend, BL student age and location demographics may change and busy, distant learners may increasingly request making all course materials available online and making online submission possible for assignments and assessments.

Institutional advocacy. Scholars have noted the importance of identifying institutional BL advocates and encouraging them to collaborate (Moskal et al., 2013; Taylor & Newton, 2012). We concluded that institutions should encourage advocacy at multiple institutional levels

due to the distinct contributions provided by college and department administrators, faculty resource centers, faculty members, and students.

Institutional administrators can approve initiatives, mobilize the institution, and allocate university resources. Likewise, departmental administrators can mobilize their faculty members and resources, in many cases identifying initial BL adopters within the department. Faculty resource centers have also made important contributions in recruiting faculty adopters, providing professional development, and offering pedagogical and technical support. Faculty and student advocates who effectively adopt BL provide motivating and instructional examples for other potential adopters.

Ideally, faculty and student advocates should drive BL adoption, and administrative advocates should facilitate it. If administrators attempt to impose BL implementation without faculty and student advocates, they are likely to encounter significant resistance to what faculty may view as a primarily top-down initiative.

Definition. The NGLC grant institutions' complied with scholars' recommendations that institutions adopt a BL definition while allowing faculty pedagogical flexibility (Garrison & Vaughan, 2013; Toth et al., 2008). A uniform definition facilitates clear communication among university personnel, preparation of professional development materials, and designation of which courses should be identified in course catalogs as blended. The accepted definition should delineate BL's structural rather than pedagogical dimensions. For example, a definition could designate a reduction in seat time and the combination of face-to-face and online instruction but allow individual adopters to make pedagogical decisions for their subject areas and students.

Structure

Infrastructure. Scholars have emphasized the importance of adequate technological infrastructure during BL adoption (Garrison & Kanuka, 2004; Niemiec & Otte, 2010); however, only one university reported upgrading its servers and bandwidth to accommodate increased quantities of online materials. Institutions with relatively few initial adopters may not yet require upgraded servers or bandwidth, but administrators should anticipate that upgrades will be required as the quantity and use of online materials increases as additional faculty and students adopt BL.

Scheduling. Nearly all institutions examined in this study conformed to scholars' recommendation to clearly designate BL classes in course catalogs (Niemiec & Otte, 2010; Toth et al., 2008). Students should be advised of the course format before they register. Also, students can more easily plan their schedules if the catalog lists the dates and times of face-to-face and online sessions.

Governance. All but one institution we examined conformed with scholars' recommendations to create clear guidelines for BL course approval (Moskal et al., 2013; Niemiec & Otte, 2010). Identifying faculty who planned to implement BL allowed schools to provide adopters with professional development and support. It may also allow schools to identify examples of successful BL adoption and to evaluate BL courses.

Ideally, governance of BL policies will involve input from both institution and department administrators. As the ultimate adopters of BL, faculty can also provide crucial input regarding BL adoption. While independent organizations at the university, such as distance education or faculty resource centers, may play a core role in BL implementation, those tasked

with governing institutional and departmental policies and resources can most effectively govern policies and allocate resources for establishing BL.

Evaluation. While the institutions surveyed have not yet fully complied with scholarly recommendations to formally evaluate BL implementation (Dziuban & Moskal, 2011; Taylor & Newton, 2012), they may be establishing the foundation for future evaluation. The institutions reported few changes in course evaluations, assessments, and outcomes during BL adoption. Parallel evaluation may facilitate comparative evaluations between traditional and BL modalities.

When evaluations are based on common measures and outcomes in traditional and BL classes, positive evaluation data may be pivotal in recruiting new adopters and maintaining institutional support. Institutions in the early adoption stage may need to emphasize the importance of evaluation since schools may otherwise focus exclusively on other issues during the first few years of adoption (Sharpe et al., 2006).

Professional development. While all of the universities surveyed applied scholars' recommendation to offer professional development for BL adopters (O'Dowd, 2013), they utilized a variety of delivery methods. Institutions should consider a number of variables when selecting delivery methods, including the commitment and availability of potential training providers, the number of adopters who require training, and the needs of participants.

Institutions should evaluate potential providers' availability and commitment to facilitate BL adoption. If the institution obliges a provider to train adopters or if the provider does not have the available personnel or resources to do so, BL adopters may not receive the training they require. Potential providers may include faculty resource centers, departments, distance education centers, or other campus organizations.

Institutions should also determine the number of adopters who require training. At institutions with few adopters, a limited number of institutional personnel may provide adequate training in one-on-one or small group sessions. In contrast, a university with a significant number of adopters may require the personnel and resources necessary for large-group seminars or webinars, training courses, or online training.

Professional development providers should consider the needs of their faculty adopters. For example, MSU faculty had demanding schedules and varying levels of BL expertise; accordingly, MSU created its online Digital Professor Academy to allow professors to receive instruction at any time and location and to focus on materials appropriate for their level of expertise. MSU also conducted its BL "boot camp" to satisfy the needs of a department that wished to adopt BL together.

Support

Technical and pedagogical support. All institutions reported pre-existing technological and pedagogical support for both faculty and students. While nearly half of the universities provided additional pedagogical and technical support for BL faculty adopters, only two institutions reported adding BL technical support, and no one reported adding pedagogical support for student users.

This oversight regarding student support may be due to institutions' initial focus on obtaining, training, and supporting faculty BL adopters. Institutions may also anticipate that, unlike faculty, students in BL courses will only require minimal support. Such an assumption may not be justified. Some students may lack pre-existing technical skills and struggle if no support is available. Accordingly, institutions should determine and provide support for needs of both faculty *and* student BL adopters.

Institutional incentives. Institutions provided two of the three categories of BL adoption incentives recommended in the literature: financial compensation through stipends and additional time for adoption by allocating student assistants (Korr et al., 2012; O'Dowd, 2013). BL implementers may have focused primarily on financial incentives because they were relatively easier to provide and because they could use NGLC grant funds to finance them.

The findings in this study suggest that institutions should consider providing incentives to BL adopters. In addition to the incentives universities in this study employed, course load reductions could provide faculty with additional time needed to effectively develop a BL course. Consideration during promotion could attract newer faculty to adopt and demonstrate institutional support for BL. Failure to consider BL adoption in tenure and promotion decisions may serve as a disincentive for instructors who fear lower student ratings while they work to successfully adopt BL.

Institutions in the early adoption stage may be able to obtain a core group of innovative faculty who are willing to adopt BL without formal incentive. However, incentives supply initial and continued momentum for institutional BL implementation among those who may be initially less enthusiastic. Incentivizing influential faculty to successfully adopt BL could also increase the number of effective BL advocates and exemplars.

Conclusion

This article examined 11 cases of institutional BL adoption in which universities transitioned between the BL stages of awareness/exploration and adoption/early implementation. We identified patterns and distinctions regarding institutions' strategy, structure, and support decisions during that transition.

Key strategy, structure, and support conclusions emerging from these findings include the strategic need to develop BL advocates at multiple institutional levels in order to establish a shared implementation vision, obtain necessary resources, and attract potential adopters. In addition, institutions need to define BL structure for potential adopters while allowing them the freedom to make pedagogical decisions.

Key structural conclusions include the need to adequately develop an infrastructure that facilitates BL adoption as well as the need to provide technical and pedagogical training to facilitate the transformation of face-to-face courses to BL experiences in a way that integrates the best elements of in-person and online learning. Key support conclusions include the necessity of providing adequate ongoing technical and pedagogical support not only for teachers, but also for BL students who may lack the necessary skills to thrive in a BL classroom.

We anticipate these findings and conclusions will guide institutions of higher education in strategically adopting and implementing blended learning on campus. Specifically, we expect institutions will be able to use this information to better identify institutional strategy, structure, and support markers that would allow them to determine their progress in adopting BL. In addition, we anticipate institutions will be aware of issues they should address to successfully transition from awareness and exploration of BL to adoption and early implementation.

Future research could determine the nature of strategy, structure, and support patterns and distinctions at institutions transitioning between adoption/early implementation and mature implementation/growth. Research might also examine institutional adoption stages and markers from differing perspectives, including faculty, student, or support staff viewpoints.

This study observed that many institutions begin implementing BL with a small group of initial adopters and anticipate scaling their efforts; future research could identify core factors that

need to be considered during institutional scaling. Examples of such issues could include physical and technical infrastructure needs, identifying the owner of intellectual property rights for online materials, and the continued use of incentives to facilitate faculty adoption.

In addition, scholars may further investigate institutional BL adoption at universities with atypical implementation dynamics. For example, researchers could examine the effectiveness of incorporating face-to-face instruction into courses that have previously been fully online. Researchers could also observe BL adoption at smaller colleges or at colleges that specifically target working professionals.

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Appendix A
Interview Protocol

1. **Introduction** – the purpose of this study is to better understand the policies and issues surrounding the transition from awareness and exploration of blended learning to its adoption and implementation at participant's institution. In addition to asking about the current institutional status of blended learning, we will also inquire whether any evolution/alterations have occurred.

2. **General Questions**
    a. How did BL get started at your institution?
    b. How did your school transition from an awareness and exploration of blended learning to its formal adoption and implementation?
    c. How does your institution define blended or hybrid learning?
    d. What issues and challenges have you faced in trying to implement BL at your institution?
    e. What is the primary purpose for adopting BL at your institution? (related to improved pedagogy, increased flexibility for students/faculty, reduced costs, etc.)

3. **STRATEGY**
    a. Vision/Plan
        i. Who is driving/promoting the BL initiatives on campus?
        ii. Has the vision/purpose for BL been communicated to the campus community? If so how?
        iii. Does your institution have explicit written policies surrounding blended learning? If so, would you be willing to share them with me.

b. Implementation Strategy

i. Do you have a strategy for implementing BL across your institution? If so, what does it involve?

ii. Did the institution adapt its blended learning approach to the university's culture? How?

iii. Do you have a strategy for getting buy-in for faculty and department adoption of BL practices?

iv. Did administrators consult with individual university departments/colleges to facilitate the creation of policies that aligned with both institutional and department/college objectives?

v. Do you have a strategy for measuring progress of your implementation?

vi. How have external constraints such as accreditation affected institutional decisions around blended learning?

4. STRUCTURE

a. Institutional Policy Structure

i. **Models** - Does the institution have a specific model or architectures that have been adopted for blended learning? If so, explain.

ii. **Course Development** - Does the institution have a course development model for blended learning courses? What does the course development process look like?

iii. **Recruitment** - How do faculty become interested in and pursue teaching a blended learning course?

iv. **Scheduling** - How are blended learning courses planned and scheduled?

v. **Catalog** - Can students see whether a course is blended in the catalog? If so, what does it look like to them? How do blended learning sections of a course look different from traditional sections?

b. Comparison to F2F and Online Courses

i. **Ownership** - Where does ownership for blended learning courses reside? (within the academic departments, with a teaching and learning center, with an online learning or continuing education unit, etc.)

ii. Are the learning outcomes or competencies the same for blended learning courses as their equivalent courses in the traditional format?

iii. **Instructors** - Do the same instructors teach them?

iv. **Student-teacher Ratios** - How do student-teacher ratio expectations compare between F2F and BL courses?

v. **Assessments** - Are students evaluated/assessed the same way in blended learning courses as they are in traditional courses?

vi. **Faculty Load** - Do BL courses use a different faculty load structure than F2F courses? (e.g., seat hours vs. merit-based progression)

c. Incentive Structure

i. **Faculty incentives** - Do you offer any incentives to faculty who implement blended learning? If so, what are they (e.g., tenure incentives, funding, equipment, weighing blended learning courses more heavily than regular classes in measuring teaching load)?

d. Physical/Technological Infrastructure

i. What additional technical infrastructure, if any, has been needed to support the blended learning initiative? (libraries, academic services,)

e. Evaluation of Implementation

i. What institutional-level evaluations are in place to look at the desired outcomes for blended learning institution wide?

ii. Do you currently have students or professors report the types of blended learning they utilize in their classes?

iii. Do you currently ask students and/or professors to report the level of access, flexibility, and/or quality of blended learning? How?

5. SUPPORT

a. Faculty Professional Development

i. What technological and pedagogical support is available for professors who have decided to teach in a blended learning format?

ii. Have you conducted any training for professors regarding how to adopt blended learning in their pedagogy? Please describe.

iii. If you held initial training, have you had any subsequent seminars or forums for professors to provide updates and/or best practices? Please describe.

iv. Are there plans to increase this support in the future? What are they?

b. Student Support

i. What support is needed for students enrolled in BL courses?

ii. What support is available for students in BL courses?

6. Final Questions

a. Any additional institutional issues related to blended learning that you think are relevant to our conversation? If so, please share.

7. **Thanks for participating.**

Institutional Drivers and Barriers to Faculty Adoption of Blended Learning in Higher Education

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Abstract

Relatively little research on blended learning (BL) addresses institutional adoption, although such research would benefit institutions of higher education in strategically adopting and implementing BL. In a prior study, the authors proposed a framework for institutional BL adoption (Graham, Woodfield, & Harrison, 2013), 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. The current study applies that framework as well as Rogers' (2003) diffusion of innovations theory to determine the degree to which institutional strategy, structure, and support decisions facilitate or impede BL adoption among higher education faculty. The authors also explore whether faculty members' innovation adoption category (innovator, early adopter, early majority, late majority, or laggard) affects which decisions facilitate or impede BL adoption. To achieve these objectives, the authors surveyed 214 faculty members at a university in the adoption/early implementation stage, Brigham Young University-Idaho (BYU-I).

Keywords: blended learning, hybrid courses, faculty adoption, institutional adoption, higher education policy

Introduction

Increasing numbers of institutions of higher education are adopting blended learning (BL) (Garrison & Vaughan, 2007). In fact, 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).

Institutions implementing BL must determine how to facilitate faculty adoption (Christo-Baker, 2004). Without faculty support, an institutional initiative seeking to change the instructional format of its courses is likely to fail (Christo-Baker, 2004). After all, faculty are the primary pedagogical decision-makers in their classrooms (Graham & Robison, 2007). Research involving distance education has recognized the importance of considering faculty members' attitudes and experiences as an institution adopts pedagogical change; however, research on BL adoption has neglected the faculty perspective.

Accordingly, this study sought to identify and explore factors that influence whether faculty members choose to adopt BL. Specifically, its purpose has been to provide those interested in implementing BL with information concerning how their institutions' decisions regarding BL implementation influence faculty adoption.

Graham, Woodfield, and Harrison(2013) provided an institutional BL adoption framework that identified specific strategy, structure, and support issues that institutions address while implementing BL. This study explored how decisions on these issues may facilitate or impede faculty members' decision to adopt BL. In addition, the disparate characteristics of potential faculty adopters have been taken into account since, as Rogers (2003) asserted, those adopting an innovation such as BL have distinct characteristics that must be addressed.

In this study, we investigated the following research questions:

1. What institutional strategy, structure, and support decisions facilitate or impede BL adoption among higher education faculty?
2. Does the innovation adoption status of higher education faculty members affect which institutional strategy, structure, and support decisions facilitate or impede their BL adoption?

Literature Review

We explored the influence of the impact of institutional strategy, structure, and support decisions on BL adoption using two theoretical frameworks. First, Graham et al.'s (2012) framework for institutional adoption and implementation of BL in higher education provided the basis for the institutional decisions considered in this study. Second, the classification of faculty as specific types of innovation adopters was drawn from Rogers' (2003) diffusion of innovations framework. In this literature review, we briefly define BL, provide an overview of faculty adoption research, then describe the two frameworks below.

BL Definition

While most scholars seem to agree that BL involves a combination of face-to-face and online learning, they disagree on whether BL definitions should address other issues (Graham, 2013). For example, some researchers include a reduction of seat time in their definition (Picciano, 2009). Others specify the amount of online and face-to-face instruction required (Allen & Seaman, 2007). Some scholars include pedagogical quality in their definitions (Garrison & Kanuka, 2004). For the purposes of this paper, we will simply define BL as "learning experiences that combine face-to-face and online instruction" (Graham, 2013, p. 7).

Faculty Adoption Research

Many scholars have explored faculty adoption of various types of educational technology. The types of educational technology researchers have studied includes educational technology in general (Baia, 2008; Beggs, 2000; Zhou, & Xu, 2007), open educational resources (Mtebe & Raisamo, 2014; Ngimwa &Wilson, 2012), technologies used for distance education (Chen, 2009), and specific technologies such as a university's learning management system (Findik & Ozkan, 2013), an e-portfolio system (Swan, 2009), or an e-assessment system (McCann, 2010).

Many of these studies examined what impedes or facilitates faculty technology adoption. For example, Buchanan, Sainter, and Saunders (2013) surveyed faculty at a British university to determine perceived barriers to technology adoption. The highest number of faculty identified barriers related to the availability of technology and support. Lin, Huang, and Chen (2014) surveyed and interviewed Chinese language teachers at U.S. universities 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.

Researchers have also analyzed what would facilitate faculty adoption. For example, Beggs' (2000) surveyed 348 university U.S. faculty regarding the extent to which specified factors would facilitate their technology use. 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. Butler and Sellbom (2002) surveyed 125 faculty members at a U.S. university to determine which factors would be important to their decision whether to adopt technology. Faculty rated

technology reliability highest followed by knowing how to use the technology, belief that the technology improves learning, difficulty using the technology, and current and future technical support.

In contrast to the body of scholarship regarding faculty adoption of educational technology, relatively few scholars have specifically studied barriers to BL adoption. For example, Humbert (2007) surveyed 37 faculty members at a French university to identify BL adoption barriers. He reported faculty members' concerns regarding decreasing rich student interaction, lack of time to prepare online content and activities, and difficulty dealing with online interactions. In addition, Oh and Park (2009) surveyed 133 faculty members at Korean universities and identified barriers to BL adoption, including heavy workloads, lack of motivation, and lack of financial support.

Institutional BL Adoption Framework

Graham et al. (2013) developed a framework for institutional adoption and implementation of BL by exploring specific cases. The researchers 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.

Rogers' Diffusion of Innovations

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 early majority, the late majority, and laggards (Rogers, 2003). Subsequent scholars provided more detailed descriptions. Table 7 outlines characteristics of the five categories of innovation adopters based on the descriptions of Geoghegan (1994), Humbert (2007), Moore (2002), Rogers (2003), and Thackray, Good, and Howland (2010).

Table 7

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	They adopt at varying times after the early adopters but before the average adopters. They represent approximately 34% of adopters. They are fairly comfortable with technology, but they only adopt a new innovation when they have compelling evidence of its value and solid recommendations from other adopters.
Late majority	They adopt innovations after the early majority. They represents approximately 34% of adopters. They are typically less comfortable with technology than the early majority 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.

Moore (2002) advocated focusing adoption efforts on one category of adopters at a time, beginning with innovators. He also advised leveraging one group of adopters' successful implementation to facilitate implementation by the next adoption set. Moore noted, however, that adoption advocates would encounter a "chasm" when they transitioned from recruiting innovators and early adopters to recruiting members of the early majority. According to Moore, one requirement for crossing that chasm is recognizing ways the technology enthusiasts and

visionaries among the innovators and early adopters differ from the pragmatists who make up the early majority. Moore also indicated that those facilitating adoption should not ignore the late majority. Moore noted that recruiters rarely facilitate adoption among this one-third of potential adopters as effectively as they could.

We drew from these two theoretical frameworks to investigate the impact of institutional strategy, structure, and support decisions on BL adoption. Specifically, we used Rogers' (2003) and subsequent scholars' descriptions of innovation adoption categories to classify research participants (Geoghegan, 1994; Humbert, 2007; Moore, 2002; Rogers, 2003; Thackray, Good, & Howland, 2010). We used Graham et al.'s (2012) institutional BL adoption framework to identify specific strategy, structure, and support issues institutions address while implementing BL. Using these classifications and issues, we investigated the extent to which the framework's institutional strategy, structure, and support decisions influence BL adoption.

Method

To investigate the impact of institutional strategy, structure, and support decisions on BL adoption, we selected BYU-I as an undergraduate teaching university that had been classified in the adoption and early implementation stage of their blended learning efforts (Graham et al., 2013).

Research Context

BYU-I is a private four-year university located in Rexburg, Idaho with approximately 15,000 students ("The Carnegie Classification," 2010). In 2009, BYU-I began its "Pathway" program, offering college preparation courses in a BL format in the United States and other countries. Within the last few years, BYU-I has transitioned a number of its entry-level and evening courses into a BL format. It has also provided training to newly hired faculty and made

instructional developers and academic technology representatives available to any faculty members who would like assistance redesigning their courses into a blended format (Graham et al., 2013). BYU-I refers to BL as "hybrid" teaching. A few years ago, the institution published a statement defining hybrid courses and outlining some best practices for their adoption. BYU-I defines BL as the combination of face-to-face and online learning with a reduction in class time (Graham et al., 2013).

Data Collection

During December, 2013 and January 2014, we conducted an online survey of full- and part-time BYU-I instructors; 226 professors began the survey, and 214 professors (approximately 39% of BYU-I faculty) completed it. We considered an online survey appropriate in this context since "the Internet is a useful mode for conducting surveys targeted at very specific populations" such as university professors (Dillman, Smith, & Christian, 2009, p. 44). In addition, those in the target population have e-mail accounts, Internet access, and a personal computer or, at the least, access to on-campus computer labs. We excluded employees hired exclusively for teaching online, as they were largely part-time instructors living at a distance from campus who were not expected to teach in a blended format.

We based survey questions regarding factors that influenced faculty members' decision to adopt BL on Graham et al.'s (2012) framework for institutional adoption and implementation of BL in higher education. We designed the survey to explore (a) the appropriate innovation adoption category for each faculty member and (b) the factors that impacted faculty decisions to adopt BL. We assigned faculty to an innovation adoption category using (a) self-categorization and (b) our categorization based on adoption of specific educational technologies. The two

categorization methods were intended as a form of triangulation, and we expected to see a fairly close alignment between them.

First, we provided research-based descriptions of each of the innovation adoption categories and asked respondents to indicate which description best depicted them. Second, we asked participants about specific actions that they had taken to place portions of their courses online, including online learning resources, lectures, quizzes, exams, discussions, and collaborative tools. We further asked whether and to what extent respondents had reduced class time to compensate for the additional online activities. A copy of the survey is included as Appendix A.

Data Analysis

After collecting the data, we compared respondents' self-categorizations with their reported adoption of online technologies. As discussed in the findings, we ultimately decided not to rely on the self-categorizations since they did not align with the BL adoption scores. Instead we identified respondents' innovation adoption categories by comparing their BL adoption scores to Rogers' (2003) innovation adoption curve, portrayed in Figure 1.

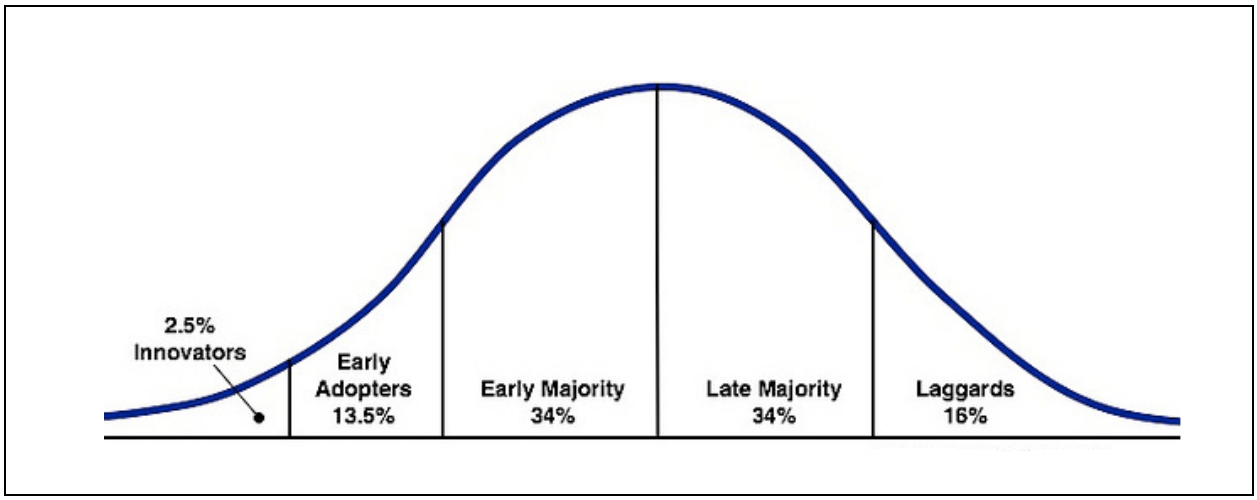

Figure 1. Rogers' (2003) classification of types of innovation adopters. Rogers would designate a variable to represent participants' level of innovativeness, determine the average of those variables, and then partition participants into five categories based on the number of standard deviations from the mean they were above or below average. Adapted from "Everett Rogers Diffusion of Innovations Graph," by Wesley Fryer, 2008, https://c1.staticflickr.com/3/2233/2564440831_af9bbbd11f_z.jpg?zz=1

Rogers (2003) classified innovation adopters by identifying an innovation, designating a target population to study, and designating a variable (e.g., time of adoption) to represent participants' innovation level. Rogers would then determine the average score and standard deviation of the variable for the class of participants, then partition individuals into five categories based on the number of standard deviations they scored above or below the average. In alignment with Rogers' (2003) classification process, we identified BL as the innovation and BYU-I professors as the target population; we then generated a BL adoption score for each respondent. We based scores on the following criteria: whether respondents reduced class time and whether they provided online learning resources (e.g., videos, websites); online lectures

(e.g., Adobe Connect); online quizzes; online exams; online discussions; or online collaborative tools (e.g., Google Docs, Google Hangouts). We then divided the number of years a respondent had adopted an online component by his or her number of years teaching and added one point for reducing class time. Figure 2 demonstrates how we would calculate the BL adoption score for a faculty member who had begun teaching three years ago and had replaced 50% of class time with online videos and live lectures two years ago.

$$\frac{\text{of years using online learning resources}}{\text{\# of years teaching}} = \frac{2 \text{ years}}{3 \text{ years}} = .67$$

$$\frac{\text{\# of years using online lecture}}{\text{\# of years teaching}} = \frac{2 \text{ years}}{3 \text{ years}} = .67$$

$$\text{Reduction of class time} = 1.00$$

$$\text{BL Adoption Score} = 2.34$$

Figure 2. Demonstration of the method used to calculate respondents' BL adoption scores.

Since BYU-I administrators began promoting the use of online technologies approximately eight years ago, we only considered the past eight years in calculating the scores.

After calculating each respondent's BL adoption score, we calculated the average of all respondents' scores and the standard deviation. We assigned respondents to categories as follows:

1. *Innovators* scored at least two standard deviations above average.
2. *Early adopters* scored between one and two standard deviations above average.
3. *Early majority* scored between average and one standard deviation above average.
4. *Late majority* scored between average and one standard deviation below average.

5. *Laggards* scored at least one standard deviation below average.

Findings

We reviewed respondents' survey answers to determine their demographic information and to identify the degree to which administrative strategy, structure, and support decisions would influence their decision to adopt BL. We also examined the level of influence these decisions had on individual categories of respondents.

Respondent Demographics and Overall Results

Survey respondents at BYU-I provided their demographic information, including their age, number of years teaching in higher education, number of years teaching at BYU-I, and faculty status, as well as whether they taught an online course. Table 8 details the demographics of the respondents.

Table 8

Demographic Characteristics of Survey Respondents

Age n=202	Range Average (SD)	30–66 years old 47.7 years old (8.5 years)
Years teaching at university Level n=214	Range Average (SD)	0–35 years 13.3 years (8.0 years)
Years teaching at BYU-I n=214	Range Average (SD)	0–30 years 10 years (7.2 years)
Faculty status n=213	Full-time faculty Part-time/adjunct Other	209 1 3
Teach fully online course n=213	Yes No	14 199

Note: n values vary because some respondents elected not to answer certain questions.

The vast majority of survey participants were full-time faculty who had not taught a fully online course. Survey respondents also identified the extent to which strategy, structure, and support decisions would impact their BL adoption. Table 9 provides a summary of their overall responses.

Table 9

Respondents' Indication of the Level of Influence Strategy, Structure, and Support Decisions Would Have on Their Decision Whether to Adopt BL

	No influence	Minor influence	Moderate influence	Significant influence
Strategy				
Whether the institution's reason for promoting BL aligns with your own	24 (11.3%)	45 (21.1%)	84 (39.4%)	60 (28.2%)
Whether institutional administrators advocate for BL	32 (15.0%)	69 (32.2%)	82 (38.3%)	31 (14.5%)
Whether your department advocates for BL	28 (13.1%)	57 (26.6%)	94 (43.9%)	35 (16.4%)
Whether other faculty members advocate for BL	34 (15.9%)	71 (33.2%)	84 (39.3%)	25 (11.7%)
Whether your university defines BL	47 (22.1%)	72 (33.8%)	65 (30.5%)	29 (13.6%)
Structure				
The ability to quickly upload and download media/materials on campus	7 (3.3%)	30 (14.0%)	63 (29.4%)	114 (53.3%)
Whether your institution's course catalog identifies BL classes	81 (38.0%)	88 (41.3%)	29 (13.6%)	15 (7.0%)
Whether faculty, departments, or institutions make BL policy decisions	41 (19.2%)	83 (38.8%)	60 (28.0%)	30 (14.0%)
The availability of evaluation data on the effectiveness of BL	25 (11.7%)	59 (27.6%)	71 (33.2%)	59 (27.6%)
The availability of one-on-one professional development/training	30 (14.08%)	61 (28.5%)	70 (32.7%)	53 (24.8%)
The availability of face-to-face professional development/training	41 (19.2%)	70 (32.7%)	63 (29.4%)	40 (18.7%)
The availability of online professional development/training	44 (20.6%)	69 (32.2%)	65 (30.4%)	36 (16.8%)
Support				
The availability of technological support	21 (9.8%)	45 (21.0%)	78 (36.4%)	70 (32.7%)
The availability of pedagogical support	35 (16.4%)	51 (23.9%)	67 (31.5%)	60 (28.2%)
Financial stipends	74 (34.6%)	53 (24.8%)	47 (22.0%)	40 (18.7%)
Temporary course load reductions	47 (22.0%)	46 (21.5%)	66 (30.8%)	55 (25.7%)
Consideration of BL adoption in tenure/promotion determinations	97 (45.4%)	51 (23.9%)	40 (18.8%)	25 (11.7%)

Overall, more faculty indicated structure and support decisions as items that would significantly influence their adoption decisions. For example, over 53% of respondents indicated that the availability of sufficient infrastructure to allow faculty to quickly upload and download media/materials on campus would significantly influence their decision to adopt BL. Over 32% of respondents noted that availability of technical support would significantly influence their BL adoption decision, and 28% indicated pedagogical support would be significantly influential. While fewer faculty identified influential strategy decisions, over 28% of them noted that their adoption decision would be significantly influenced by whether the institution's reason for promoting BL aligned with their own thinking.

Self-Categorization and BL Adoption Scores

In addition to determining influences of strategy, structure, and support decisions on survey respondents overall, we examined the influence level of these decisions on specific categories of respondents. Although we initially sought to categorize respondents' BL adoption by combining their self-categorizations with our formula categorizations, we discovered that the two were not consistent for the majority of the respondents' decisions. Figure 3 shows the comparative results.

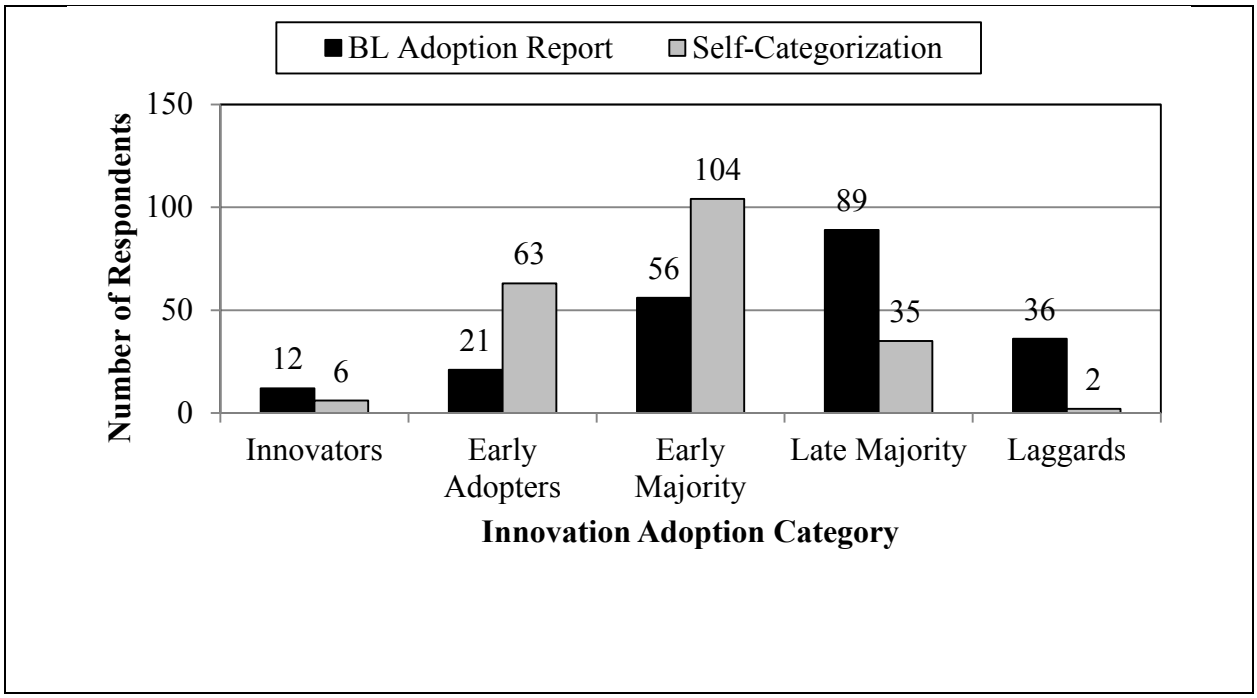

Figure 3. Comparison of the number of respondents who placed themselves in each innovation adoption category with the number of respondents who qualified for each category based on their BL adoption score.

Overall, fewer respondents categorized themselves as innovators, late majority, or laggards than indicated by their BL adoption scores. Their self-categorizations were slightly skewed towards the more innovative end of the curve, while their BL adoption scores were slightly skewed towards the less innovative side. Specifically, 59% of respondents categorized themselves as more innovative than shown by their BL adoption scores, 11% categorized themselves as less innovative, and 28% chose the self-categorization that matched the score we calculated for them. However, 66% of respondents whose self-categorization did not match their BL adoption score placed themselves within one category of their BL adoption score. Ultimately, we used the calculated BL adoption score rather than respondents' self-categorization to assign respondents to a category because we theorized that respondents' actual

innovation adoption efforts would serve as a better determinant of innovation adoption status than respondents' self-perceptions.

Influential Decisions for Individual Innovation Adoption Categories

Once we identified the innovation adoption categories of survey respondents, we examined the extent to which strategy, structure, and support decisions would impact the particular categories of BL adopters. Table 10 provides a summary of participant responses by innovation adoption category.

Table 10

Respondents' Indication of Strategy, Structure, and Support Decisions That Would Have a Moderate or Significant Influence on Their Decision Whether to Adopt BL

	Innovators n=12	Early adopters n=21	Early majority n=56	Late majority n=89	Laggards n=36
Strategy					
Whether the institution's reason for promoting BL aligns with your own	9(75%)	12(57.1%)	36(64.3%)	61(68.5%)	26(74.3%)
Whether institutional administrators advocate for BL	5(41.7%)	9(42.9%)	31(55.4%)	50(56.2%)	18(50%)
Whether your department advocates for BL	8(66.7%)	14(66.7%)	34(60.7%)	52(58.4%)	21(58.3%)
Whether other faculty members advocate for BL	5(41.7%)	12(57.1%)	30(53.6%)	44(49.4%)	18(50%)
Whether your university defines the degree of technology integration they expect you to achieve	4(36.4%)*	9(42.9%)	21(37.5%)	45(50.6%)	15(41.7%)
Structure					
The ability to quickly upload and download media/materials on campus	12(100%)	16(76.2%)	45(80.4%)	76(85.4%)	28(77.8%)
Whether your institution's course catalog identifies BL classes	5(41.7%)	3(14.3%)	9(16.1%)	20(22.5%)	7(20%)
Whether faculty, departments, or the institution make BL policy decisions	3(25%)	9(42.9%)	27(48.2%)	37(41.6%)	14(38.9%)
The availability of evaluation data on the effectiveness of BL	7(58.3%)	13(61.9%)	39(69.6%)	53(59.6%)	18(50%)
The availability of one-on-one professional development/training	7(58.3%)	10(47.6%)	30(53.6%)	51(57.3%)	25(69.4%)
The availability of face-to-face professional development/training	7(58.3%)	9(42.9%)	24(42.9%)	45(50.6%)	18(50%)
The availability of online professional development/training	8(66.7%)	6(28.6%)	23(41.1%)	46(51.7%)	18(50%)
Support					
The availability of technological support	6(50%)	13(61.9%)	36(64.3%)	67(75.3%)	26(72.2%)
The availability of pedagogical support	6(50%)	13(61.9%)	30(53.6%)	56(63.6%)*	22(61.1%)
Financial stipends	4(33.3%)	8(38.1%)	26(46.4%)	35(39.3%)	14(38.9%)
Temporary course load reductions	5(41.7%)	11(52.4%)	31(55.4%)	53(59.6%)	21(58.3%)
Consideration of BL adoption in tenure/promotion determinations	3(25%)	7(35%)*	11(19.6%)	32(36%)	12(33.3%)

*Note: The n value decreased by one for this item because a respondent elected not to answer this question.

All categories of adopters reported the influence that structure and support decisions would have on their adoption decision. At least 43% of the respondents in each category reported infrastructure issues that would significantly influence their decision to adopt. The importance of infrastructure was especially apparent among innovators, 83% of whom reported it would have a significant influence. At least 26% of each respondent category indicated that technical support would significantly influence their decision, but fewer of the innovators and early adopters considered technical support influential than did later adopters. In addition, at least 20% related that purpose, a strategy measure, would have a significant influence on their adoption decision.

Discussion

Self-Categorization and BL Adoption Scores

We discovered that many respondents' self-categorizations were different from their BL adoption scores. This corresponds with Humbert's (2007) finding that faculty may not always accurately identify their innovation adoption category when asked to classify themselves. Anticipating this difference in perception may prove important for those seeking to accurately identify categories of adopters for future research or institutional application. While 76% of respondents' self-categorization matched or came within one category of their BL adoption score, this level of alignment was not sufficient for our purpose, and it will likely not be sufficient for future researchers. Similarly, institutional implementers seeking to meet the distinct needs of each adoption category will likely want more accurate identification. Thus researchers and implementers may need to identify methods that rely on respondents' actions rather than their self-perceptions.

However, institutional implementers may still find self-categorization data useful. Faculty who overestimate their innovativeness may be more willing to align their actions with their self-perception. Institutions may consider identifying those individuals and facilitating such alignment as an initial step in their BL implementation efforts.

Overall Results

In a prior study we noted that universities transitioning from stage one to stage two of BL adoption focused much of their effort on strategy decisions, such as defining BL and advocating for its adoption. These institutions focused less on structure or support decisions (Porter, Graham, Spring, & Welch, 2014). In contrast, large numbers of faculty in this study identified structure decisions (e.g., providing adequate infrastructure) and support decisions (e.g., providing technical and pedagogical support) as having a significant influence on their decision to adopt.

At the same time, faculty reported some support decisions as less influential than others. Financial stipends and tenure/promotion consideration were among the decisions faculty most frequently reported as having "no influence" on their BL adoption decision. One reason so many BYU-I respondents may have indicated that tenure/promotion consideration would have no influence on their decision may be due to the process by which their school conducts its tenure or "continuing faculty status" (CFS) decisions. BYU-I faculty are expected to gain CFS within three years, but CFS is viewed less as evaluation, remediation, or possible dismissal and more as a professional development opportunity in which faculty receive support, feedback, and guidance to successfully integrate them into the university. Consequently, implementers should be mindful of the how BYU-I's policies and environment, especially regarding tenure and promotion, may differ from their own institution's unique culture and should temper their application of these findings and their approach accordingly. Institutional implementers may

consider examining their faculty members' attitudes toward traditional incentives and eliminating those that are less motivating in order to allocate more of their resources toward establishing infrastructure and BL support.

Innovators, Early Adopters, and the Early Majority

Universities may choose to accept Moore's (2002) recommendation to focus first on facilitating adoption among innovators and early adopters. Institutional implementers might want to keep in mind that in this study both innovators and early adopters indicated that their adoption decisions would be significantly influenced by establishing adequate infrastructure and support and by recognizing that the institution's purposes for adopting BL were congruent with their own.

Once innovators and early adopters are successfully implementing BL, institutions may consider adjusting their implementation strategies to breach the adoption "chasm" between early adopters and the early majority (Moore, 2002). Unlike earlier adopters, the early majority typically adopt a new innovation when they have compelling evidence of its value. For example, the early majority was the only group to report evaluation data as having the second most significant influence on their adoption decision. Thus when focusing on early majority faculty, institutions may consider providing these individuals with evaluation data collected from earlier adopters' courses. Since the early majority rated alignment of purpose as another significantly influential factor, institutional leaders may also consider communicating their objectives for BL adoption with rationales that both administrators and faculty share.

The Late Majority and Laggards

Once an institution has facilitated adoption of the early majority, it can turn its attention to the late majority. These individuals reported infrastructure, technical support, and one-on-one

training among the most influential, which aligns with Rogers' (2003) description of the later majority as feeling less comfortable with technology. Thus institutions recruiting members of the late majority may consider providing sufficient training and support for them within a secure infrastructure.

Laggards ultimately adopt an innovation, but they are the most difficult to recruit. According to Moore (2002), they express aversion to technology and resist adopting new innovations even when they become necessary. However, laggards identified essentially the same decisions as influential (e.g., infrastructure, support, and purpose) that innovators and early adopters did, so institutions can prepare to meet the needs of laggards as they meet the needs of earlier adopters.

We noted that more of the late majority and laggards reported incentives would be influential than their more innovative colleagues did. Accordingly, institutions may consider offering course load reductions and financial stipends to further facilitate adoption among these later adopters.

Conclusion

In this study the authors applied their previously published institutional adoption framework along with Rogers' (2003) diffusion of innovations theory to determine the degree to which institutional strategy, structure, and support decisions facilitate or impede BL adoption among higher education faculty. In addition, they considered whether higher education faculty's innovation adoption status affected which decisions would facilitate or impede BL adoption.

We discovered that many respondents' self-categorizations were different from their BL adoption scores and ultimately used the calculated BL adoption score to assign respondents to a category. We concluded that while institutional implementers may still find self-categorization

data useful, researchers and implementers may need to identify methods that rely on respondents' actions rather than their self-perceptions.

Based on respondents' overall results, we also concluded that institutional implementers may consider identifying their purpose for adopting BL and establishing sufficient infrastructure and support while examining their faculty members' attitudes toward traditional incentives and eliminating those that are less motivating. Since each university has a distinct culture (e.g., a unique tenure process), we concluded BL implementers should temper their application of these findings and their approach accordingly.

Regarding earlier adopters, we concluded that providing infrastructure and support as well as identifying the institution's purpose for adopting BL may be influential for innovators and early adopters. Based on the early majority's favorable report regarding evaluation data, we concluded institutions may consider collecting such data from earlier adopters' courses and sharing it with the early majority. Based on the late majority's report, we concluded that those recruiting the late majority may consider providing sufficient training and support for them within a secure infrastructure. Since laggards identified essentially the same decisions as influential (e.g., infrastructure, support, and purpose) that innovators and early adopters did, we concluded that institutions may prepare to meet the needs of laggards as they meet the needs of earlier adopters.

Future research could include interviews with faculty regarding their rationales for indicating particular decisions as facilitating or impeding their BL adoption. Such interviews might draw from the full spectrum of innovation adopters or focus on certain categories. For example, a qualitative study might closely examine rationales of the early majority in order to focus on breaching the adoption chasm. Another qualitative study might focus on the late

majority, seeking ways to alter a recruiting strategy to attract those who generally lack initiative to adopt. Research could also investigate whether there is any significance in the finding that the earliest adopters and the laggards reported the same decisions as likely to influence their own choice to adopt. Future research might also explore why adopters' self-categorizations are so consistently different from their BL adoption scores, how self-categorization affects adoption behavior, or whether self-categorization becomes more accurate as an institution progresses in BL adoption.

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Appendix A
Survey

Demographics

1. How many years have you taught at the university level? [Allows for 1 decimal place]
2. How many years have you taught at BYU-Idaho?
3. What year were you born?
4. Which of the following BEST describes your current status at the university?
    a. Full-time faculty
    b. Part-time/adjunct instructor
    c. Other _____
5. Do you teach any fully online courses?

Identify Category of Innovation Adopter

Please answer the following questions for your campus courses only (not your fully online courses).

1. Please indicate which of the following you provide online for ANY of your classes (excluding fully online classes). [The option is to select yes/no for each. Follow-up/indented questions should be answered following "yes" responses.]
    a. Course syllabus
    b. Other learning resources primarily used in class and made available online (e.g., PowerPoint presentations shown in class, handouts)
    c. Online quizzes
        i. Approximately how long ago did you begin placing quizzes online?
    d. Online exams

i. Approximately how long ago did you begin placing exams online?

e. Learning outcomes

i. Do you track any of your learning outcomes online?

f. Online discussions

i. Approximately how long ago did you begin placing discussions online?

g. Online collaborative projects (e.g., Google Docs, Google Hangouts)

i. Approximately how long ago did you begin using online collaborative projects?

h. Live online class lecture (e.g., Adobe Connect, Google Hangouts)

i. Approximately how long ago did you begin using live online class lectures?

i. Online learning resources used primarily for online instruction (e.g., videos, simulations, websites)

i. Approximately how long ago did you begin using such learning resources?

j. Other (Please describe)_____

2. Have you reduced the time or frequency you meet in class because you placed a portion of you course online?

i. Yes, I reduced overall class time by at least 50%

ii. Yes, I have reduced overall class time by approximately 25–49%

iii. Yes, I have reduced overall class time by approximately 1–24%

iv. No, I have not reduced the time or frequency I meet in class

3. What BEST describes your typical reaction to new technologies?

a. I am constantly adopting multiple new technologies. I adopt well before anyone else, sometimes even before a new technology is publicly available.
b. I actively investigate new technologies and adopt the best ones. I am generally one of the first to adopt a new technology, and my peers adopt based on my recommendation/example.
c. I wait to adopt until I have compelling evidence of the technology's value and recommendations from my peers. I am not among the first to adopt, but I am generally in the first half of those adopting a technology.
d. I am not necessarily opposed to new technologies, but I am cautious and will only adopt when it becomes necessary to do so.
e. I recognize that new technologies have value to my colleagues, but I feel strongly about using traditional resources. I will continue using my current resources, even when pressured to adopt a new technology.

Identify Factors that Influence Adoption Decision and the Extent of Influence

Please indicate the level of influence each of the following would have on your decision to place a portion of your course online (e.g., quizzes, exams, discussions, lectures, learning resources):

- Significant influence
- Moderate influence
- Minor influence
- No influence

1. Financial stipends for those who commit to place a portion of their course online

2. Temporary course load reductions for those who commit to place a portion of their course online
3. Consideration of whether you placed a portion of your course online during tenure/promotion determinations
4. The availability of technical support for those placing a portion of their course online
5. The availability of pedagogical support for those placing a portion of their course online (e.g., the ongoing ability to consult with an instructional developer regarding course design/delivery)
6. The availability of one-on-one professional development/training for those placing a portion of their course online
7. The availability of professional development/training presented in a face-to-face group setting for those placing a portion of their course online
8. The availability of online professional development/training for those placing a portion of their course online
9. The availability of evaluation data on the effectiveness of placing a portion of a course online
10. Whether faculty, departments, or the institution make policy decisions regarding online course materials (e.g., intellectual property rights)
11. Whether your institution's course catalog identifies classes with substantial materials and/or activities online
12. The ability to quickly upload and download media/materials on campus

13. Whether your university identifies policies and guidelines regarding placing course materials online (e.g., administrators publishing examples of different ways to appropriately combine face-to-face and online instruction)
14. Whether other faculty members share their success with placing a portion of their courses online
15. Whether department leadership encourages placing a portion of your course online
16. Whether institutional administrators encourage placing a portion of your course online
17. Whether the institution's reason for promoting technology integration aligns with your own

Final Questions

What was/would be your reaction to being asked to place a portion of your course online?

What are the greatest challenges you have experienced or would anticipate in placing a portion of your course online?

If you have placed a portion of your course online, do you feel the value added to your course(s) outweighed the challenges you experienced? Please explain.

A Qualitative Analysis of Institutional Drivers and Barriers to Blended Learning Adoption in Higher Education

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Abstract

Relatively little research on blended learning (BL) addresses institutional adoption in higher education. Such research would benefit universities seeking to strategically adopt and implement BL. 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, BYU-Idaho (BYU-I). The authors published the survey results in a prior article. The current article explores the results of the interviews.

Keywords: blended learning, hybrid courses, faculty adoption, institutional adoption, higher education policy

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). Consequently, an institution seeking to change its pedagogical approach to course delivery is likely to fail without faculty adoption (Christo-Baker, 2004). 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, 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 innovation theory to address the disparate characteristics of potential faculty adopters. Previously, we surveyed faculty members at BYU-I to investigate the degree to which institutional strategy, structure, and support decisions influenced their willingness to adopt BL (Porter & Graham, in review). For the purposes of this study, we conducted follow-up interviews with survey respondents to explore the reasons faculty members reported certain

strategy, structure, and support decisions would facilitate or impede their BL adoption. In this study, 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?

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.'s (2012) framework for institutional adoption and implementation of BL in higher education and Rogers' (2003) diffusion of innovations framework.

BL Definition

Although an increasing number of people are discussing BL, some 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 factors, 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).

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. Such studies focus on various types of educational technology. Many researchers have focused on the adoption of educational technology in general (Baia, 2008; Beggs, 2000; Zhou, & Xu, 2007). Other researchers specified a class of educational technology they studied, such as open educational resources (Mtebe & Raisamo, 2014; Ngimwa & Wilson, 2012) or technologies used for distance education (Chen, 2009). Other studies focused on faculty adoption of specific technologies, including a university's learning management system (Findik-Coskuncay & Ozkan, 2013), an e-portfolio system (Swan, 2009), or an e-assessment system (McCann, 2010).

Many of these studies examined barriers to faculty technology adoption. For example, Lin, Huang, and Chen (2014) surveyed and interviewed Chinese language teachers at U.S. universities 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. In addition, Beggs (2000) surveyed 348 U.S. faculty members regarding the extent to which certain factors would impede their technology adoption. Barriers that the highest number of faculty rated as important to critically important included lack of time and lack of equipment.

Researchers have also explored how to facilitate faculty adoption. For example, Beggs' (2000) survey also examined the extent to which certain factors would facilitate faculty members' technology use. 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. In addition, Butler and Sellbom (2002) surveyed 125 faculty members at a U.S. university to determine which factors would be important in determining whether to adopt technology. Faculty rated technology reliability highest followed by knowing how to use the technology, belief that the technology improves learning, difficulty using the technology, and current and future technical support.

Institutional BL Adoption Framework

We based our study on Graham et al.'s (2012) 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.

Rogers' Diffusion of Innovations

We also based our study on Rogers' (2003) diffusion of innovation 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 11 outlines characteristics of the five categories of innovation adopters based on the descriptions of Geoghegan (1994), Humbert (2007), Moore (2002), Rogers (2003), and Thackray, Good, and Howland (2010).

Table 11

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 represents 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.

Moore (2002) recommended focusing adoption efforts on one category of adopters at a time, beginning with innovators. He also advised leveraging one group of adopters' successful implementation to facilitate implementation by the next set of adopters. Moore identified a "chasm" advocates would encounter when they transitioned from recruiting innovators and early adopters to recruiting members of the EM. According to Moore, crossing that chasm requires implementers to recognize how the needs of the innovators and early adopters differ from the

needs of the EM. Moore also noted that recruiters rarely facilitate adoption among the LM as effectively as they could despite the large quantity of adopters in this group.

We employed these two theoretical frameworks to investigate the impact of institutional strategy, structure, and support decisions on BL adoption. Specifically, we used Rogers' (2003) and subsequent scholars' descriptions of innovation adoption categories to classify research participants (Geoghegan, 1994; Humbert, 2007; Moore, 2002; Rogers, 2003; Thackray et al., 2010).

We used Graham et al.'s (2012) institutional BL adoption framework to identify specific strategy, structure, and support issues institutions address while implementing BL. Using these classifications and issues, we investigated the extent to which the framework's institutional strategy, structure, and support decisions influence BL adoption.

Method

Research Context

To investigate the impact of institutional strategy, structure, and support measures on BL adoption among the early and LM, we conducted a survey and interviews of faculty at BYU-Idaho (BYU-I). We selected BYU-I because we had previously classified it as a university that had entered the BL adoption and early implementation stage (Graham et al., 2013).

BYU-I is a private four-year university located in Rexburg, Idaho with approximately 15,000 students ("The carnegie classification," 2010). In 2009, BYU-I began its "Pathway" program, offering college preparation courses in a BL format in the United States and other countries. Within the last few years, BYU-I has transitioned a number of its entry-level and evening courses into a BL format. It has also provided training to newly hired faculty and made instructional developers and academic technology representatives available to any faculty members who would like assistance redesigning their courses into a blended format (Graham et

al., 2013). BYU-I refers to BL as "hybrid" teaching. A few years ago, the institution published a statement defining hybrid courses and outlining some best practices for their adoption. BYU-I defines BL as the combination of face-to-face and online learning with a reduction in class time (Graham et al., 2013).

Data Collection

During December 2013 and January 2014, we conducted an online survey of full- and part-time BYU-I instructors. We excluded employees hired exclusively for teaching online, as they were largely part-time instructors living at a distance from campus who were not expected to teach in a blended format. Ultimately, 226 professors began the survey, and 214 professors (approximately 39% of BYU-I faculty) completed it. We designed the survey to determine (a) the appropriate innovation adoption category for each faculty member and (b) the factors that impacted faculty decisions to adopt BL. To determine the innovation adoption categories of respondents, we compared participants' self-categorizations with their reported adoption of various online technologies. The two did not align for the majority of respondents, and we ultimately determined we would assign adoption categories based on respondents' reported adoption of online technologies. We previously published a full description and analysis of our method for designating faculty members' innovation adoption category as well as the results of the survey (Porter & Graham, in review). A copy of the survey is included as Appendix A.

In early 2014, we conducted 30-50 minute semi-structured interviews with a stratified sample of survey respondents to identify why they reported certain strategy, structure, and support decisions would impact their decision to adopt BL. Case studies such as this are appropriate when a researcher seeks to study a hypothesis regarding a class of people by examining a specific case from that class (Merriam, 1998). We based the interview protocol on Graham et al.'s (2012) framework for institutional adoption and implementation of BL in higher

education. We asked participants to indicate why certain factors they identified while participating in the survey would influence their decision to adopt BL. We engaged in peer debriefing and sought feedback regarding questions' content and format (Lincoln & Guba, 1985). The interview protocol is included as Appendix B.

We drew our stratified sample of interviewees from among the members of the early and LM. We focused on the EM and the LM because the purpose of this study is to provide institutional administrators and others interested in BL adoption with information regarding how to facilitate adoption among their faculty. By definition, innovators and early adopters generally implement technologies such as BL early and on their own initiative (Geoghegan, 1994; Rogers, 2003). Thus, they are unlikely to require institutional assistance or influence to adopt BL. Institutions are also unlikely to influence laggards to adopt BL since they resist adopting new innovations even after necessity prompts it (Humbert, 2007; Rogers, 2003).

We selected potential interviewees by identifying respondents whose self-categorization aligned with or was within one category of the category we assigned based on their reported adoption efforts (see Porter & Graham, in review for details). We did this to increase the likelihood that participants' interview responses would align with their actions. We first e-mailed all survey respondents whose self-categorization matched their reported adoption efforts and invited them to participate in an interview. We then continued inviting groups of survey respondents whose self-categorization aligned within one category to participate in an interview until we felt satisfied with the quantity of potential interviews. We took field notes for and recorded 39 interviews, 17 from the EM, and 22 from the LM. During the semi-structured interviews, we asked the questions indicated in our interview protocol, prompting interviewees to provide further details until we felt we had sufficiently exhausted each line of inquiry.

Data Analysis

After completing the interviews, we reviewed, analyzed, and compared the data contained in the field notes for each interviewee. We reviewed the responses interviewees provided for individual questions. As they responded, interviewees identified whether the institutional strategy, structure, and decisions we asked them about would influence their BL adoption decision. Interviewees also identified the reasons why institutional decisions would or would not impact whether they adopted BL. Accordingly, we analyzed and compared interviewees' responses regarding whether and why institutional strategy, structure, and support decisions would affect their BL adoption. We identified themes in those responses and recorded the number of interviewees who identified each theme.

Before reporting these findings, we created a list of the themes we identified and had three of the researchers review over 20% of the interviews. The researchers independently classified and recorded the themes the interviewees addressed and compared their results. The three researchers' recorded classifications aligned for 90.3% of the themes.

We sought to ensure the credibility, transferability, dependability, and confirmability of our research in alignment with Lincoln and Guba's (1985) recommendations. To sustain credibility, we engaged in peer debriefing, progressive subjectivity checks, negative case analysis, and member checks. We debriefed with peers to obtain feedback regarding our method, analysis, and conclusions. We conducted progressive subjectivity checks by identifying and addressing any biases and preferences during data analysis. We also engaged in a limited form of negative case analysis. Negative case analysis involves developing hypotheses, then searching for any cases that contradict those hypotheses. If contradictory cases are discovered, researchers modify their hypotheses to account for the new cases. Researchers continue this process until they cannot find new negative cases (Lincoln & Guba, 1985). We engaged in a

limited form of negative case analysis by developing hypotheses regarding the bases for faculty members' survey responses and modifying those hypotheses as we conducted each interview. We interviewed as many faculty as reasonable limits of time and circumstance allowed and modified our conclusions to account for all available cases. After compiling relevant data, we conducted member checking by asking BYU-I representatives to verify our statements' accuracy.

To promote transferability—the readers' ability to apply findings from one context to other contexts or settings (Lincoln & Guba, 1985)—we provided a rich context for our results with institutional and population data. To establish dependability, we maintained an audit trail while collecting data, interpreting findings, and reporting results. We also designated our rational for selecting survey and interview participants. To sustain confirmability, we compared our findings other research that have classified innovation adopters and investigated factors that influence faculty members' decisions to adopt an innovation like BL (Lincoln & Guba, 1985).

Findings and Discussion

After collecting, analyzing, and working to establish the credibility, transferability, dependability, and confirmability our data, we recorded our findings and drew a number of conclusions. To provide a context for those findings, we recorded the demographics of interviewees and have provided them below. Following the demographics, we shared our findings and conclusions regarding the themes of strategy, structure, and support and how they influenced faculty members' BL adoption decision.

Demographics of Interviewees

Survey respondents at BYU-I provided their demographic information, including their age, number of years teaching in higher education, number of years teaching at BYU-I, faculty status, and whether they teach an online course. Table 12 details interview demographics.

Table 12

Demographic Characteristics of Interviewees

		Overall n=37	Early Majority n=17	Late Majority n=22
*Age	Range	34-61 years old	34-59 years old	35-61 years old
	Average (SD)	48.3 years old (7.7)	48.1 years old (8.1)	48.8 years old (6.0)
Years Teaching at University Level	Range	0-30 years	0-30 years	3-29 years
	Average (SD)	13.9 years (7.3)	12.4 years (9.2)	15.6 years (6.0)
Years Teaching at BYU-I	Range	0-30 years	0-30 years	1-24 years
	Average (SD)	10.2 years (7.0 years)	8.7 years (8.2 years)	11.2 years (5.9 years)
Faculty Status	Full-time faculty (%)	38 (97.4%)	17 (100%)	21 (95.7%)
	Part-time/adjunct (%)	0 (0%)	0 (0%)	0 (0%)
	Other (%)	1 (2.6%)	0 (0%)	1 (4.3%)
**Teach Fully Online Course	Yes (%)	1 (2.6%)	0 (0%)	1 (4.5%)
	No (%)	37 (94.9%)	16 (100%)	21 (95.5%)

*The n value decreased for this question because 1 member of the early majority and 1 member of the late majority chose not to disclose their age.
** The n value decreased for this question because 1 member of the late majority elected not to answer.

Nearly all interviewees were full-time faculty members and reported they had not taught an online course. Notably, members of the LM taught longer on average than the EM, and no interviewee from the LM had taught for fewer than 3 years.

Strategy

After collecting and analyzing our data, we identified themes that interviewees reported most frequently to explain why administrative strategy decisions would influence them to the level reported in the survey. We organized these findings and our discussion using the survey data provided in Table 13.

Table 13

Survey Data from Porter & Graham (2014) Indicating Strategy Decisions That Would Have a Moderate or Significant Influence on the Early and Late Majority's Decision Whether to Adopt BL

	Overall *n*=145	Early majority *n*=56	Late majority *n*=89
Strategy			
Purpose: Whether the institution's reason for promoting BL aligns with your own	97(66.9%)	36(64.3%)	61(68.5%)
Advocacy (Departmental): Whether your department advocates for BL	86(59.3%)	34(60.7%)	52(58.4%)
Advocacy (Administrative): Whether institutional administrators advocate for BL	81(55.9%)	31(55.4%)	50(56.2%)
Advocacy (Faculty): Whether other faculty members advocate for BL	74(51.0%)	30(53.6%)	44(49.4%)
Definition/Policy: Whether your university defines the degree of technology integration they expect you to achieve	66(45.5%)	21(37.5%)	45(50.6%)

level reported in the survey. We organized these findings and our discussion using the survey data provided in Table 13.who indicated that a strategy decision would have a moderate or significant influence on their BL adoption decision, ranked the decisions from most to least influential overall, and presented our findings and discussion in that order. We also compiled tables of themes that at least 3 faculty members identified. We included those more exhaustive tables in this dissertation's Appendix A.

Purpose. The largest number of EM and LM survey respondents indicated that they would be moderately or significantly influenced by whether the institution's reason for promoting BL aligned with their own. Eleven interviewees explained that alignment of purpose

would be influential if that purpose was helping students. As one interviewee stated, "I only want to do things if it's for the best of the students." In contrast with those who found alignment of purpose influential, 16 interviewees explained that institutional purpose would not influence them because they were influenced by their own purposes, they planned on following the administration anyway, or because institutional purpose was not persuasive generally. As one interviewee ultimately explained, "You're always convinced for your own reasons." Another interviewee noted that "I'll do what I'm supposed to do" whether or not purposes align. A third interviewee explained that ". . . just because your reason doesn't align with mine doesn't mean I won't do it." Accordingly, we concluded that alignment of purpose may not influence some faculty members. However, since other faculty members indicated they would be influenced by the institution's purpose, especially if that involved helping students, institutional BL implementers may consider highlighting BL's student benefits of BL adoption.

Advocacy. At least 31 interviewees reported that administrative advocates would not influence their BL adoption decision. Of those, 22 interviewees expressed concern that administrators would not base their advocacy on first-hand experience with BL. One interviewee stated that "ideas, in theory, are awesome, but in practicality, it just doesn't work." Other interviewees were concerned that administrators "may have other motives" or that administrators' position of authority made their BL advocacy seem like they are "trying to force something down on me."

Similarly, at least 20 interviewees reported that departmental advocates would not be influential. Eleven of those expressed concern that department leaders would not base their advocacy on first-hand experience. One interviewee explained that "I don't want somebody coming to me who hasn't been in the trench telling me . . . how to ease into the trench." Others expressed concern that department leaders would act as administrative spokespeople or that

department leaders' motives and loyalties may be disparate from their own. For example, one interview noted he would feel department leaders "were passing information from above." Another indicated, "Some of their interests and loyalties may be different from my own concerns for my classroom."

In contrast, at least 34 interviewees indicated faculty advocates would influence their adoption decision. Of those, 31 explained that other faculty members are in a similar situation. For example, interviewees stated that faculty advocates "are in the same place as I am" or that "they've been there; they've done that." The other three interviewees assumed faculty advocates would have similar motivations. As one interviewee stated, "I would assume my fellow faculty member . . . wouldn't be driven by an agenda that threatened the integrity of our teaching." An additional nine interviewees noted that they would also be influenced if they knew and/or trusted the faculty member or if the faculty member belonged to their department.

Based on interviewees' preference for advocates with first-hand teaching and/or BL implementation experience, we concluded that faculty may be more likely to influence members of the EM and LM. Universities that previously facilitated BL adoption among their earliest adopters may consider recruiting them to advocate for BL. Since earlier adopters are more likely to advocate for BL adoption if they had a positive experience implementing BL, institutions may consider fostering positive BL adoption experiences among their earliest adopters. We also noted the nine interviewees' preference for those they knew and/or were members of their department and concluded that departments could provide an effective setting for advocacy. We also hypothesized that benefits to intradepartmental faculty advocacy could also include the fact that faculty members who recruit colleagues in their department have the potential to provide continued encouragement, content-specific BL adoption strategies, and informal pedagogical and technical support.

Notably, interviewees' statements that faculty would be more influential contrasted with EM and LM survey respondents' report that faculty, departmental, and administrative advocates would be comparably influential. The discrepancy in survey and interview data regarding the relative influence of administrative, departmental, and faculty advocates may have several explanations. For example, interviewees may have responded to this question with greater understanding than survey respondents. During interviews, the interviewer had the opportunity to respond to faculty questions regarding who would qualify as administrative, departmental, and faculty advocates, and what may qualify as encouragement. For example, the interviewer clarified that administrative advocates were encouraging not mandating adoption and that faculty could include faculty within the same department or in another department. In addition, interviewees were able to provide conditions to their responses that they could not provide in a survey.

Definition/Policy. Nearly half of EM and LM survey respondents identified whether their university defined the degree of technology integration they expect you to achieve as moderately or significantly influential. At least 17 of the interviewees felt this would be influential in a general sense or specifically because of the guidance and expectations it would provide or the uniformity it would facilitate. For example, one interviewee simply stated, "If there weren't guidelines, I probably wouldn't do it." Another interviewee explained that it would "be frustrating to have absolutely no guidance, not knowing what direction things are supposed to be going." A third interviewee added, "There needs to be some kind of cement that holds the students' experience across the departments fairly constant."

In addition, at least 10 other interviewees noted that guidelines would be influential if administrators set broad parameters and gave faculty flexibility to determine course-level policies. As one faculty member explained, "there has to be some standardization in terms of

definition, and also you can leave it open in terms of how faculty would approach it." At least 11 interviewees explained that university guidelines would not be influential, for example, because they would prefer administrators not direct policy decisions for their courses. One interviewee noted, "I'd rather not deal with the administration if I can avoid it." Accordingly, we concluded administrators could consider setting guidelines for BL adopters to establish expectations regarding its implementation in order to facilitate uniformity and provide adequate guidance. At the same time, administrators may consider allowing faculty the flexibility to determine their course-level approach.

Structure

We identified themes that interviewees reported most frequently to explain why administrative structure decisions would influence them to the level reported in the survey. We organized our findings and our discussion around the major categories from the survey data provided in Table 14.

Table 14

Survey Data from Porter & Graham (2014) Indicating Structure Decisions That Would Have a Moderate or Significant Influence on the Early and Late Majority's Decision Whether to Adopt BL

	Overall *n*=145	Early majority *n*=56	Late majority *n*=89
Infrastructure: The ability to quickly upload and download media/materials on campus	121(83.4%)	45(80.4%)	76(85.4%)
Evaluation: The availability of evaluation data on the effectiveness of BL	92(63.4%)	39(69.6%)	53(59.6%)
Professional Development (One-on-one): The availability of one-on-one professional development/training	81(55.9%)	30(53.6%)	51(57.3%)
Professional Development (Face-to-face): The availability of face-to-face professional development/training	69(47.6%)	24(42.9%)	45(50.6%)
Professional Development (Online): The availability of online professional development/training	69(47.6%)	23(41.1%)	46(51.7%)
Governance: Whether faculty, departments, or the institution make BL policy decisions	64(44.1%)	27(48.2%)	37(41.6%)
Schedule: Whether your institution's course catalog identifies BL classes	29(20.0%)	9(16.1%)	20(22.5%)

Infrastructure. The highest number of EM and LM survey respondents, 83.4%, indicated that their BL adoption decision would be moderately or significantly influenced by the establishment of adequate infrastructure at their institution. Likewise, at least 33 or 84.6% of interviewees indicated that infrastructure would be influential. Ten interviewees explained that students need infrastructure that consistently works. One interviewee explained, "If a student has a bad experience or difficulty with the technology, it can squelch their interest and excitement for the content of the course." Another interviewee explained, "When people are

sitting down ready to do something, they just want the access to be there. Seven interviewees indicated infrastructure was influential for them because course work and engagement stop when infrastructure fails during class or when students are completing assigned work. One interviewee explained that infrastructure is key during class in order "to transition between mediums, keep the students' attention, and work with big files and large numbers of students." Another interviewee recalled a disastrous time when "the night before the final, [the LMS] was not working." Other interviewees generally expressed the influence of infrastructure or listed specific items (e.g., video, audio, LMS) for which they would require adequate infrastructure.

In contrast, 5 interviewees expressed a willingness to wait for or work around slow internet. For example, an interviewee noted, "I don't know the difference when people talk about computer speed . . . I think 'you wait around for your computer to do stuff.' That's just not a big deal to me." We concluded that although there may be a minority of faculty who are not necessarily bothered by slow internet speeds and technical failures, adequate infrastructure will likely influence EM and LM faculty like few other administrative decisions can. Thus, institutional BL implementers may consider whether they have sufficient bandwidth and internet speed to accommodate the increased internet usage corresponding with BL adoption.

Evaluation. A large number of EM and LM survey and interview participants also indicated evaluation data would influence their decision to adopt BL. Twenty interviewees noted that research and/or evaluation data is persuasive or somewhat persuasive. As one interviewee stated, "Assuming it's good data, it's a good study, it would be persuasive." Another interviewee explained that "I spent the first 15 years of my professional career in education, so doing research, reading research . . . means a lot to me." Another six interviewees conditioned the level of influence on whether the evaluation data showed a benefit for their students. For

example, one interviewee stated, “if you show me, if you do this, your students will learn and retain more, and you can prove it, I’ll do it.”

In contrast to the level of influence survey and interview participants reported for evaluation data, Porter and Graham’s (2014) study of 11 institutions adopting BL noted that none of the institutions formally evaluated BL implementation. We concluded that those adopting BL in the future may consider gathering evaluation data for potential EM and LM adopters. We considered whether evaluation data could be gathered from the classrooms of innovators and early adopters already implementing BL and hypothesized that such data, if positive, may increase adoption among potential EM/LM adopters.

Professional development. The next highest number of EM and LM survey participants reported that one-on-one professional development would be influential. Thirteen interviewees reported the availability of one-on-one professional development would be impactful because it could be tailored to their needs. One interviewee explained that “you have particular questions and specific needs to address.” In addition, four interviewees identified the human interaction as influential, reporting that “it helps to talk to people” or that “I know that I learn better face-to-face.” Three other interviewees indicated they would be more likely to ask questions in a one-one-one setting. Specifically, an interviewee commented, “One-on-one you’re much less hesitant to ask questions. . . . [in a group setting], you feel like you may be vulnerable, you may ask a stupid question.” Three other interviewees assumed one-on-one assistance would take place while they were actually creating their BL course, and one noted, “I’d rather get the support as needed.”

Nearly half of EM and LM survey respondents indicated the availability of professional development in a face-to-face group setting would be moderately or significantly influential. Twenty-four interviewees reported that such a setting would be beneficial because they learn

from what others share in a group setting. Ten of those interviewees specified that they would learn from others' questions or concerns. One interviewee explained that "hearing other people's concerns or issues . . . would be really important." Three other interviewees noted they enjoyed real-time feedback and responses. As one faculty member stated, "[I]t would be important to have that type of instantaneous feedback." Another three interviewees suggested using a face-to-face group setting for initial information, then switching to another format. For example, one interviewee outlined, "Initially, [I would want] a face-to-face group format, but . . . when it came down to I've got to change this course from face-to-face to hybrid, then I'd want it to be individual." In contrast, five interviewees expressed concern that a group format may not be sufficiently tailored, or, as an interviewee stated, "may not fit what you really need yourself."

Nearly half of EM and LM survey respondents also indicated that the availability of online professional development would be moderately or significantly influential. In contrast, at least 21 interviewees indicated the availability of online training would not be influential. Nine interviewees expressed concern regarding the lack of face-to-face interaction. Interviewees made comments such as "I can't see the people, and I can't interact with them" or "it's just nicer to be able to talk to real people." Another five interviewees reported apprehension that they would have a limited ability to receive the feedback they needed. One interviewee explained, "If you've got an issue that you'd like to have addressed, it might be more difficult to get at least a fairly rapid answer to your question." Another interviewee noted concern that when asking a question "All the body language is gone . . . if I had a piece of paper, I could sketch something out. . . ." Four other interviewees made general statements regarding online training such as "I don't see how that would benefit me." In contrast, 6 interviewees indicated they would be influenced by the flexibility online training offered. One interviewee highlighted the flexible timing of the training: "I could get [training] at my own time, at my own leisure, when I wanted

it, how I wanted it" Another interviewee focused on the flexible rate of training: "[I would have] the flexibility to move at my own speed and move quickly through the information that maybe I feel like I've got."

In sum, we concluded that professional development providers may consider using multiple delivery methods to address faculty preferences. For example, as a few interviewees noted, trainers could provide initial, general BL training in a group setting. Professional development providers could also make instructional designers available to faculty as trainers and/or support to provide more tailored assistance while they are implementing BL. In addition, providers could make information and resources available online, so faculty members could access it at on their own schedule and progress at their own rate. Notably, complaints about online training directly related to the themes outlined regarding one-on-one and group training (e.g., the value of face-to-face interaction, the importance of receiving prompt feedback and responses, the need for tailored instruction).

Governance. Approximately 44% of EM and LM survey participants indicated that whether faculty, departments, or the institution made BL policy decisions would moderately or significantly influence their adoption decision. During interviews, we were able to determine who participants preferred to make policy decisions and why they expressed that preference. At least 12 interviewees preferred faculty as the policy makers for general reasons or because faculty were the ones implementing BL. One interviewee explained that "if a faculty member is going to expend time, resources, and knowledge to create and mold and do all of the work, I think that they ought to have a say in who owns it and how it gets used." Five other interviewees wanted administrators to create policy for the sake of uniformity. As one interviewee noted, "There's got to be some uniform agreement." Seven interviewees preferred some combination of the three groups to make policy. For example, one interviewee outlined that "some of the

bigger policies need to be under the administration umbrella, but I would want to retain at the faculty . . . level the choices that flesh that out." Other interviewees noted, "There has to be buy-in at all levels" and "ideally [policies] should come from all three really. Everybody should be able to get together."

We concluded that BL implementers should consider reviewing this data in conjunction with the data gathered regarding the publication of administrative BL policies and definitions. In response to that question, interviewees emphasized the importance of administrators creating uniform policy and providing clear expectations. In contrast, here interviewees focused more on faculty input regarding ownership and use of materials. We concluded that administrators may address interviewees' responses to both questions by setting forth broad guidelines that provide clear, uniform expectations after seeking faculty input and buy-in at all levels.

Schedule. The least number of survey participants indicated that identifying BL classes in the course catalog would influence their BL adoption decision. Twenty-one interviewees noted that while it would not be influential, it would be beneficial. Interviewees explained "it helps students to understand that this course is going to be different than that course," which is beneficial because, for example, "some students are going to work well in that format; they're going to enjoy the hybrid style." Nine interviewees made general statements about the lack of influence scheduling designations would have or noted that BL designations don't need to be in the course catalog. Their reasons for this included that the BL courses weren't that different or teachers could explain the format in other ways. One teacher explained that "if you feel like the courses are pretty equivalent, I don't know why you'd need to make separate designations for them." Another teacher recalled a time when he announced the class was in a BL format on the first day: "My department head had not put it in the catalog as a hybrid, so the students all showed up that day, and I said . . . this is the way this is going to be." In contrast, six

interviewees explained that scheduling designations would be influential to make students aware of the course's format. For example, one participant noted, "I like that just because [students] know what to expect," and another commented, "I think it's the right thing to do in terms of advertising fairly." We concluded that even though placing a designation for BL classes in the catalog may not be as influential as other administrative decisions, instructors may likely appreciate the notice it provides to their students. We concluded that such notice could provide students with information that would be helpful to choose the class format that works best for them and that this would only have a secondary influence on faculty adoption.

Support

We identified themes that interviewees reported most frequently to explain why administrative support decisions would influence them to the level reported in the survey. We organized our findings and our discussion around the major categories from the survey data provided in Table 15.

Table 15

Survey Data from Porter & Graham (2014) Indicating Support Decisions That Would Have a Moderate or Significant Influence on the Early and Late Majority's Decision Whether to Adopt BL

	Overall *n*=145	Early majority *n*=56	Late majority *n*=89
Technological Support: The availability of technological support	103(71.0%)	36(64.3%)	67(75.3%)
Pedagogical Support: The availability of pedagogical support	86(59.3%)	30(53.6%)	56(63.6%)*
Incentives: Temporary course load reductions	84(57.9%)	31(55.4%)	53(59.6%)
Incentives: Financial stipends	61(42.1%)	26(46.4%)	35(39.3%)
Incentives: Consideration of BL adoption in tenure/promotion determinations	43(29.7%)	11(19.6%)	32(36%)

*Note: The *n* value decreased by one for this item because a respondent elected not to answer this question.

Technological support. The availability of technological support was the most influential support decision and the second most influential decision overall for EM and LM survey respondents. Fourteen interviewees explained why by making general statements that technical support would be influential or that technological functionality was important to them. For example, one interviewee forthrightly declared, "technical support has to be there." Another instructor who used Google Hangouts noted, "If students can't get on to meet together . . . or if they can't get on because the management system is down, that's a big problem." Eleven interviewees acknowledged their feelings of technological inadequacy with statements such as "I'm not a computer person." Four other interviewees were concerned about wasting time trying to resolve technical issues. As one interviewee explained, "If you run into those situations and you don't have any help . . . you're probably going to spend a lot of time doing things that. . .

don't benefit the class" In contrast seven faculty members felt technologically capable enough that technical support would not influence their BL adoption decision. One interviewee noted, "I'm familiar with computers; I can do it."

We anticipated that technological support may be influential for EM and LM survey respondents and interviewees. Theorists have described the EM as more conservative in adopting new technologies and the LM as comparatively less technologically savvy (Moore, 2002; Geoghegan, 1994). The importance of technical functionality, interviewees' expressions of inadequacy, and the need for support to save time aligned with theorists' descriptions. We concluded that BL implementers seeking to recruit members of the EM and LM may consider making potential EM and LM adopters aware of support resources and scaling their technical support efforts to facilitate addressing BL issues.

Pedagogical support. EM and LM survey participants indicated that the availability of pedagogical support was the next most influential. Eight interviewees indicated that such support would be useful when designing the online component of BL. For example, one interviewee explained, "I wouldn't mind having a second set of eyes on my course design just in terms of how well I've translated things from the classroom format to an online format." Another interviewee indicated how nice it would be "to see examples." Seven other interviewees made general statement about the influence of pedagogical support such as "it has been very helpful" or "having someone come in would be fantastic." In contrast, 10 interviewees felt the availability of pedagogical support would not be influential because they had sufficient pedagogical experience. For example, one interviewee noted, "I'm a teacher, and that's a way of teaching." Another said, "I teach chemistry and it's pretty straightforward what you need to do for chemistry." One interviewee "had a lot of experience adapting pedagogy." Another "did a PhD program in instructional design"

We noted that the experience faculty cited as the basis for their confidence included classroom teaching, knowledge of their subject matter, instructional design experience, and an instructional design degree. While a degree and experience in instructional design may likely qualify interviewees to adopt BL to at least the same extent as those providing support, we wondered whether other credentials would as readily facilitate effective BL adoption. For example, classroom teaching experience or subject matter knowledge may facilitate quality face-to-face sessions, but we wondered how they would facilitate creating effective online instruction or making the best use of face-to-face time versus time online. As eight interviewees recognized, designing the online component of BL will likely require assistance. We concluded that administrators and those providing professional development may need to help some EM and LM BL adopters realize that they need to know how to effectively create and integrate technology-based learning in a way that compliments what they do face-to-face.

Course load reductions. Approximately 58% of EM and LM survey participants indicated that the availability of course load reductions for those who commit to adopt BL would be moderately or significantly influential. Interviewees influenced by course load reductions focused their explanations on the importance of time. Fourteen interviewees specifically identified the need for more time to adopt BL or for other pursuits. For example, one interviewee noted, "that would give me more time to implement and understand better what I want to do to make [BL] successful." Another interviewee commented, "That can open up additional opportunities for developing other materials or getting involved in other research projects and things like that." Eleven interviewees noted that a course load reduction would be influential because they valued their time or needed additional time. These interviewees made comments such as "time is the big factor for just about anything" or "there's just always a feeling of being extremely busy and having a hard time getting to things that you want to get to." In

contrast, three interviewees indicated they were not influenced by a reduction in course load because they enjoy teaching. As one interviewee stated, "I love teaching; I don't want a load reduction."

Financial stipends. Approximately 42% of EM and LM survey participants indicated that the availability of financial stipends would be moderately or significantly influential while approximately 58% noted stipends would have no influence or a minor influence on their BL adoption decision. At least nine interviewees indicated stipends would be influential in general or because it would provide compensation of the extra work required. One interviewee explained, "There's an added workload to make that transition . . . so the added financial incentive or course reduction provides compensation for that." Five interviewees likewise indicated stipends would be influential, but they conditioned it on the amount of the stipend. As one interviewee stated, "I'm 56, and people my age, you have to pay them an awful lot."

In contrast, 14 interviewees indicated stipends would not be influential because they needed time more than they needed money, they felt they had sufficient money, or that money was not motivating. For example, one interviewee commented that "even if it was a great stipend . . . I don't feel like I have the time" Those that did not find money motivating made comments such as "I could use more money, but it's not my motivator" or "I didn't become a teacher because of the money"

Tenure/Promotion. BYU-I EM and LM survey respondents and interviewees agreed that the least influential incentive was whether their institution valued BL adoption during tenure/promotion determinations. Twenty-six interviewees explained that they already had tenure—what BYU-I terms Continuing Faculty Status (CFS)—or that they were not concerned about receiving it. Interviewees commented, "I have CFS already" or "I don't feel that worried about CFS." Another three interviewees hypothesized that BL adoption would be only one

among multiple factors considered during the CFS process. As one interviewee noted, "It just seems to me like that would be one element in a CFS binder."

Based on the survey and interview data, we concluded that course load reductions would be the most influential incentive for EM and LM participants. We found it interesting that survey and interview participants considered load reductions more influential than financial stipends since Porter and Graham (2014) noted in a prior study of institutions adopting BL that financial stipends were the most commonly offered incentive. Course load reductions may have been more popular at BYU-I due to the relatively high teaching load there. It may also be because "most faculty, faced with the demands of research, teaching, and service, view the time devoted to technology as time not spent on more pressing tasks" (Surry & Land, 2000, p. 151). Consequently, when administrators moderate the demands of teaching with a course load reduction, we hypothesized that it may provide the time necessary for BL adoption among some faculty members.

The relative lack of influence tenure/promotion had on EM and LM participant was likewise notable. Explanations for this reaction may include interviewees' current status at the university, demographics, and/or BYU-I's distinct tenure/CFS process. In addition, many interviewees reported already having CFS. This aligned with our expectations since BYU-I generally makes CFS determinations within the first three years, and the average interviewee had taught at BYU-I for 10 years. Interviewees also reported not feeling concerned about receiving CFS. This is likely because BYU-I's CFS process is viewed less as evaluation, remediation, or possible dismissal and more as a professional development opportunity in which faculty receive support, feedback, and guidance to successfully integrate them into the university. Accordingly, we concluded that implementers may consider examining their faculty members' attitudes

toward financial stipends, course load reductions, and tenure/promotion consideration to determine whether those would influence faculty at their individual institutions.

EM and LM Distinctions

As we analyzed our data, we noted that while EM and LM interviewees identified similar quantities of most themes, there were several disparities in EM and LM responses. In Table 16 we identified instances in which there was at least a 20% difference in the number of EM and LM interviewees who identified a particular strategy, structure, or support theme.

Table 16

Strategy, Structure, and Support Themes Interviewees Identified for Which There Was at Least a 20% Difference between EM and LM Participants' Responses

Theme	EM *n*=17 # (%)	LM *n*=22 # (%)
Strategy		
Advocacy (Departmental Leadership): I know and/or respect my department leaders	4(23.5%)	0(0.0%)
Advocacy (Faculty): Faculty are in a similar situation	11(64.7%)	20(90.9%)
Policy: University guidelines facilitate uniformity	0(0.0%)	5(22.7%)
Structure		
Infrastructure: Students need solid infrastructure that consistently works	2(11.8%)	8(36.4%)
Infrastructure: Course work and engagement stop when infrastructure fails	5(29.4%)	2(9.1%)
Evaluation: Research/data is persuasive	10(58.8%)	7(31.8%)
Professional Development (Online): Lack of face-to-face interaction	2(11.8%)	7(31.8%)
Support		
Incentives (course load reduction): Time is important	1(5.9%)	6(27.3%)

Strategy. Twenty or approximately 90% of the LM noted that faculty members would be influential because they are in a similar situation. Members of the LM were also more likely to question their superiors' motives. Four members of the LM indicated that department leaders had different motives than they did, and five members of the LM repeated this assertion regarding administrators. In contrast, four members of the EM reported that departmental leaders would be influential because they had developed a personal relationship or a sense of trust with them, only one member of the EM questioned administrators' motives, and none of the EM questioned department leaders' motives. We concluded that those attempting to recruit members of the LM may consider focusing more heavily on faculty advocacy than on departmental or administrative advocacy. We made the same conclusion regarding members of the EM since many of them indicated faculty advocates would be influential. However, we also noted that they may be less likely than the LM to question the motives of administrators, especially their own departmental administrators.

Interviewees, especially the LM, indicated it would be influential if administrators published BL guidelines because it would facilitate uniformity or hold "the students' experience across the departments fairly constant." Accordingly, we concluded that administrators seeking to recruit the LM may consider publishing a BL definition and other BL guidelines university-wide.

Structure. While both the EM and the LM emphasized the importance of technological infrastructure, the EM focused more on the potential interference of technical issues' with course work than the LM did. Potential explanations may include the fact that, on average, the EM adopted more technology more quickly than did the LM. Consequently, they were more likely to have experiences where technology interrupted course work and engagement. LMs' comparatively lower degree of experience may also help explain why they were more focused

than EMs on the reliability of the infrastructure. LMs may not have felt the same level of confidence to work with or around technical issues as they arose. We concluded that though EM and LMs expressed their concerns in distinct manners, their concerns centered on the stability and speed of the Internet. Accordingly, we concluded that institutional BL implementers may consider increasing and maintaining their bandwidth and internet speed to accommodate increased on-campus internet usage by BL adopters.

In addition to solid infrastructure, members of the EM and LM felt strongly about the importance of evaluation data based on sound methods. Over half of the EM interviewed confirmed the influential nature of such data. This corresponds with Rogers' (2003) characterization of the EM as those who only adopt new innovations when they have compelling evidence of its value. Accordingly, administrators seeking to overcome the chasm between early adopters and the EM may consider providing evaluation data demonstrating the value of BL. Also, they may consider gathering such data from the classrooms of innovators and early adopters already implementing BL.

Interviewees also noted the importance of effective professional development. EM and LM interviewees' responses were most disparate regarding online training with more members of the LM expressing concern regarding the lack of face-to-face interaction. Nineteen members of the LM indicated a preference for face-to-face training in order to hear others' experiences, ideas, and questions as well as receive quick feedback and answers. One member of the LM explained that "if I don't know what questions to ask, if I go to a classroom, there's other people that ask questions" We hypothesized that LM interviewees may feel less confident with technology and more accustomed to face-to-face interaction. That would align with Geoghegan's (1994) description of the LM as those less comfortable with technology. To assist the LM, we concluded that those offering online professional development may consider

providing group or one-on-one training sessions. This training could feature faculty members who have already adopted BL sharing their experiences, addressing questions, and providing real-time feedback.

Support. In general, there was not a substantial difference between EM and LM interviewees' responses regarding BL support decisions. Relatively similar percentages of EM and LM interviewees identified specific themes regarding technical support, pedagogical support, and incentives. For example, 29.4% of the EM and 27.3% of the LM interviewees expressed a feeling of technological inadequacy. In addition, 29.4% of the EM and 31.8% of the LM were not concerned about getting tenure. The largest discrepancy between EM and LM interviewees related to course load reductions. Specifically, 5.9% of EM interviewees and 27.3% of LM interviewees indicated course load reductions would be influential because "time is important." However, similar percentages of EM and LM interviewees indicated time would be important; they simply may not have used those words or parallel expressions. Specifically, 64.7% of the EM and 64.1% of the LM indicated course load reductions would be influential because they needed time in order to adopt BL, they needed time for other matters, they needed more time in general, or time is important.

Conclusion

In this article, the authors applied Graham et al.'s (2012) previously published institutional adoption framework as well as Rogers' (2003) diffusion of innovations theory to determine why faculty in the early and LM predicted that specific institutional strategy, structure, and support measures would or would not influence their BL adoption decision. As a result of this study, we hope universities will consider identifying and addressing the needs of the members of the early and LM. Institutions seeking to bridge the adoption chasm between early adopters and the EM may consider whether they have scaled their infrastructure and technical

support to address the needs of all potential adopters as well as having evaluation data available. Institutions may consider recruiting existing BL adopters from among the innovators and early adopters to produce such data and to assist with advocacy and professional development efforts. If possible, advocates may belong to the same department as the members of the EM they are recruiting. Universities may consider offering load reductions to allow the EM time to prepare and implement their BL courses.

Universities may continue these efforts when recruiting the LM while keeping in mind the importance they may likely place on consistently functioning infrastructure, group training, sufficient technological support, and clear BL guidelines. Universities may also be aware that members of the LM may more frequently question BL advocates' motives for adopting BL and may adopt out of a sense of necessity.

Future research could include interviews with innovators, early adopters, and/or laggards regarding their rationales for indicating particular decisions as facilitating or impeding their BL adoption. Future research could also focus on students' experience with BL, including how universities could facilitate and support their adoption efforts. In addition, researchers could examine whether consideration of BL adoption efforts during tenure and promotion would be more influential for faculty who have not yet received tenure or at a university with a different tenure process than BYU-I. Researchers may also consider analyzing whether faculty would be more influenced by evaluation data originated within their department or institution. Future research could also conduct analogous surveys and interviews at universities at a later stage of BL adoption or expand the study to part-time faculty.

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Appendix A
Survey

Demographics

6. How many years have you taught at the university level? [Allows for 1 decimal place]
7. How many years have you taught at BYU-Idaho?
8. What year were you born?
9. Which of the following BEST describes your current status at the university?
    a. Full-time faculty
    b. Part-time/adjunct instructor
    c. Other _____
10. Do you teach any fully online courses?

Identify Category of Innovation Adopter

Please answer the following questions for your campus courses only (not your fully online courses).

4. Please indicate which of the following you provide online for ANY of your classes (excluding fully online classes)? [option to select yes/no for each – follow-up/indented questions given following "yes" responses]
    a. Course syllabus
    b. Other learning resources primarily used in class and made available online (e.g., PowerPoint presentations shown in class, handouts)
    c. Online quizzes
        i. Approximately how long ago did you begin placing quizzes online?

d. Online exams
    i. Approximately how long ago did you begin placing exams online?
e. Learning outcomes
    i. Do you track any of your learning outcomes online?
f. Online discussions
    i. Approximately how long ago did you begin placing discussions online?
g. Online collaborative projects (e.g., Google Docs, Google Hangouts)
    i. Approximately how long ago did you begin using online collaborative projects?
h. Live online class lecture (e.g., Adobe Connect, Google Hangouts)
    i. Approximately how long ago did you begin using live online class lectures?
i. Online learning resources used primarily for online instruction (e.g., videos, simulations, websites)
    i. Approximately how long ago did you begin using such learning resources?
j. Other (Please describe)_____

5. Have you reduced the time or frequency you meet in class because you placed a portion of you course online?
    i. Yes, I reduced overall class time by at least 50%
    ii. Yes, I have reduced overall class time by approximately 25-49%
    iii. Yes, I have reduced overall class time by approximately 1-24%
    iv. No, I have not reduced the time or frequency I meet in class
6. What <u>BEST</u> describes your typical reaction to new technologies?

a. I am constantly adopting multiple new technologies. I adopt well before anyone else, sometimes even before a new technology is publicly available.
b. I actively investigate new technologies and adopt the best ones. I am generally one of the first to adopt a new technology, and my peers adopt based on my recommendation/example.
c. I wait to adopt until I have compelling evidence of the technology's value and recommendations from my peers. I am not among the first to adopt, but I am generally in the first half of those adopting a technology.
d. I am not necessarily opposed to new technologies, but I am cautious and will only adopt when it becomes necessary to do so.
e. I recognize that new technologies have value to my colleagues, but I feel strongly about using traditional resources. I will continue using my current resources, even when pressured to adopt a new technology.

Identify Factors that Influence Adoption Decision and the Extent of Influence

Please indicate the level of influence each of the following would have on your decision to place a portion of your course online (e.g., placing quizzes, exams, discussions, lectures, learning resources online):

- o Significant influence
- o Moderate influence
- o Minor influence
- o No influence

18. Financial stipends for those who commit to place a portion of their course online
19. Temporary course load reductions for those who commit to place a portion of their course online
20. Valuing whether you placed a portion of your course online during tenure/promotion determinations
21. The availability of technical support for those placing a portion of their course online
22. The availability of pedagogical support for those placing a portion of their course online (e.g., the ongoing ability to consult with an instructional developer regarding course design/delivery)
23. The availability of one-on-one professional development/training for those for those placing a portion of their course online
24. The availability of professional development/training presented in a face-to-face group setting for those for those placing a portion of their course online
25. The availability of online professional development/training for those for those placing a portion of their course online
26. The availability of evaluation data on the effectiveness of placing a portion of a course online
27. Whether faculty, departments, or the institution make policy decisions regarding online course materials (e.g., intellectual property rights)
28. Whether your institution's course catalog identifies classes with substantial materials and/or activities online
29. The ability to quickly upload and download media/materials on campus

30. Whether your university identifies policies and guidelines regarding placing course materials online (e.g., administrators publish examples of different ways to appropriately combine face-to-face and online instruction)
31. Whether other faculty members share their success with placing a portion of their courses online
32. Whether department leadership encourages placing a portion of your course online
33. Whether institutional administrators encourage placing a portion of your course online
34. Whether the institution's reason for promoting technology integration aligns with your own

Final Questions

What was/would be your reaction to being asked to place a portion of your course online?

What are the greatest challenges you have experienced or would anticipate in placing a portion of your course online?

If you have placed a portion of your course online, do you feel the value added to your course(s) outweighed the challenges you experienced? Please explain.

Appendix B
Interview Protocol

Introduction:

You took a survey in which you were asked to rate the level of influence a number of factors would have on you decision to place a portion of your course online (e.g., placing quizzes, exams, discussions, lectures, learning resources online). The purpose of this interview is to determine why those factors would influence your decision to the level you indicated. A copy of your survey responses will be available to you during the interview.

Questions:

1. Why would financial stipends for those who commit to place a portion of their course online influence your opinion to the level you indicated in the survey?
2. Why would temporary course load reductions for those who commit to place a portion of their course online influence your opinion to the level you indicated in the survey?
3. Why would valuing whether you placed a portion of your course online during tenure/promotion determinations influence your opinion to the level you indicated in the survey?
4. Why would the availability of technical support for those placing a portion of their course online influence your opinion to the level you indicated in the survey?
5. Why would the availability of pedagogical support for those placing a portion of their course online (e.g., the ongoing ability to consult with an instructional designer regarding course design/delivery) influence your opinion to the level you indicated in the survey?

6. Why would the availability of one-on-one professional development/training for those placing a portion of their course online influence your opinion to the level you indicated in the survey?
7. Why would the availability of professional development/training presented in a face-to-face group setting for those placing a portion of their course online influence your opinion to the level you indicated in the survey?
8. Why would the availability of online professional development/training for those placing a portion of their course online influence your opinion to the level you indicated in the survey?
9. Why would the availability of evaluation data on the effectiveness of placing a portion of a course online influence your opinion to the level you indicated in the survey?
10. Why would it influence your opinion to the level you indicated in the survey if faculty, departments, or the institution make policy decisions regarding online course materials (e.g., intellectual property rights)?
11. Why would it influence your opinion to the level you indicated in the survey if your institution's course catalog identifies classes with substantial materials and/or activities online?
12. Why would the ability to quickly upload and download media/materials on campus influence your opinion to the level you indicated in the survey?
13. Why would it influence your opinion to the level you indicated in the survey if your university identifies policies and guidelines regarding placing course materials online (e.g., administrators publish examples of different ways to appropriately combine face-to-face and online instruction)?

14. Why would it influence your opinion to the level you indicated in the survey if other faculty members share their success with placing a portion of their courses online?
15. Why would it influence your opinion to the level you indicated in the survey if department leadership encourages placing a portion of your course online?
16. Why would it influence your opinion to the level you indicated in the survey if institutional administrators encourage placing a portion of your course online?
17. Why would it influence your opinion to the level you indicated in the survey if the institution's reason for promoting technology integration aligns with your own?
18. Is there anything else that would influence your decision to place a portion of your course online?

DISSERTATION CONCLUSION

In these three articles, the authors explored administrative and faculty perspectives relating to the institutional adoption of BL with the goals of (a) identifying and providing details about key issues that institutional administrators should be aware of in order to guide their institutions towards successful adoption and implementation of BL and (b) identifying key markers related to institutional strategy, structure, and support that would allow institutions to gauge the progress they are making towards institutionalizing BL.

In the first article, we applied Graham et al.'s (2012) institutional adoption framework to 11 universities participating in a NGLC grant. Key strategy, structure, and support conclusions emerging from that study included the strategic need to develop BL advocates at multiple institutional levels in order to establish a shared implementation vision, obtain necessary resources, and attract potential adopters. In addition, we concluded that institutions need to define BL structure for potential adopters while allowing them the freedom to make pedagogical decisions. Key structural conclusions included the need to adequately develop an infrastructure that facilitates BL adoption as well as the need to provide technical and pedagogical training to facilitate the transformation of face-to-face courses to BL experiences in a way that integrates the best elements of in-person and online learning. Key support conclusions included the necessity of providing adequate ongoing technical and pedagogical support not only for teachers, but also for BL students who may lack the necessary skills to thrive in a BL classroom.

In the second article, we explored how Graham et al.'s (2012) institutional strategy, structure, and support decisions influence faculty members' decision to adopt BL. We also applied Rogers' (2003) diffusion of innovations theory to determine the degree to which institutional strategy, structure, and support measures facilitated or impeded BL adoption among

higher education faculty. In contrast to university administrators' focus on BL implementation strategy that we reported in article one, large numbers of faculty we surveyed for the second article identified structure and support decisions as having a significant influence on their BL adoption decision. While respondents did identify one strategy decision, alignment of purpose, as influential, more participants identified infrastructure and technical support as having a significant influence on their adoption decision. A number of respondents likewise reported that factors such as pedagogical support, evaluation data, temporary course load reductions, and one-on-one professional development would have a significant influence on their BL adoption decision.

In the third article, we reviewed the results of the interviews we conducted with survey respondents belonging to the early and LM to determine why the factors they identified would influence their BL adoption decision. Key conclusions emerging from this study included that institutions should first seek to facilitate a positive BL adoption experience among the earliest adopters, then seek to bridge the adoption chasm between early adopters and the EM by scaling their infrastructure and technical support to address the needs of all potential adopters as well as having evaluation data available. Universities should continue these efforts when recruiting the LM while keeping in mind the importance they will likely place on consistently functioning infrastructure, group training, sufficient technological support, and clear BL guidelines.

We anticipate the findings and conclusions set forth in these articles will guide institutions of higher education in strategically adopting and implementing blended learning. Specifically, we expect institutions will be able to use this information to better identify institutional strategy, structure, and support markers that would allow them to determine their progress in adopting BL and which will facilitate adoption among their faculty. In addition, we

anticipate institutions will be aware of issues they should address to successfully transition from awareness and exploration of BL to adoption and early implementation.

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Dissertation Appendix A

Table 17

Themes at Least 3 Interviewees Identified regarding Why or Why Not It Would Influence Their BL Adoption Decision If the Institution's Reason for Promoting Technology Integration Aligned with Their Own

Theme identified	EM *n*=17 # (%)	LM *n*=22 # (%)	Overall *n*=39 # (%)	Sample response
Why influential				
General statement	1 (5.9%)	2 (9.1%)	3 (7.7%)	"The more those [purposes] align, the more willing faculty would be to do it."
Why influential (conditionally)				
If the common purpose is helping students	5 (29.4%)	6 (27.3%)	11 (28.2%)	"I only want to do things if it's for the best of the students."
Why not influential				
I am influenced by my purposes, not theirs	4 (23.5%)	2 (9.1%)	6 (15.4%)	"You're always convinced for your own reasons." "I don't care . . . if we're going to do the same thing that will have a positive impact for the administration and a positive impact on my students, that's fine."
I will follow the administration regardless	2 (11.8%)	3 (13.6%)	5 (12.8%)	"I'll do what I'm supposed to do."
General statement	3 (17.6%)	2 (9.1%)	5 (12.8%)	"Just because your reason doesn't align with mine doesn't mean I won't do it."
Other	4 (23.5%)	5 (22.7%)	9 (23.1%)	

Table 18

Themes at Least 3 Interviewees Identified regarding Why or Why Not It Would Influence Their BL Adoption Decision If Institutional Administrators Encouraged Them to Place a Portion of Their Course Online

Theme identified	EM *n*=17 # (%)	LM *n*=22 # (%)	Overall *n*=39 # (%)	Sample response
Why not influential				
Administrators are not likely speaking from first-hand experience	9 (52.9%)	13 (59.1%)	22 (56.4%)	"Ideas, in theory, are awesome, but in practicality, it just doesn't work." "Have you been [in the trenches]? Are you there now?"
Administrators may have different motives	1 (5.9%)	5 (22.7%)	6 (15.4%)	"They may have other motives."
Feeling of obligation	2 (11.8%)	1 (4.5%)	3 (7.7%)	"You're just trying to force something down on me."
Other	7 (41.2%)	5 (22.7%)	12 (54.5%)	

Table 19

Themes at Least 3 Interviewees Identified regarding Why or Why Not It Would Influence Their BL Adoption Decision If Department Leaders Encouraged Them to Place a Portion of Their Course Online

Theme identified	EM *n*=17 # (%)	LM *n*=22 # (%)	Overall *n*=39 # (%)	Sample response
Why influential				
I know and/or respect my department leaders	4 (23.5%)	0 (0.0%)	4 (10.3%)	"When I talk to my department chair, I'm talking to a friend, a colleague."
Department leaders are teachers too	2 (11.8%)	2 (9.1%)	4 (10.3%)	"Our chair is just one of us."
Why not influential				
Department leaders may not be speaking from first-hand experience	3 (17.6%)	8 (36.4%)	11 (28.2%)	"I don't want somebody coming to me who hasn't been in the trench telling me . . . how to ease into the trench." "If you're a little further removed . . . it might be a great idea in theory, but there just may be some unanticipated implementation issues."
Department leaders are spokespeople for the administration	2 (11.8%)	3 (13.6%)	5 (12.8%)	"I would feel like they were passing information from above."
Department leaders have different motives	0 (0.0%)	4 (18.2%)	4 (10.3%)	"Some of their interests and loyalties may be different from my own concerns for my classroom."
Other	6 (35.3%)	8 (36.4%)	14 (35.9%)	

Table 20

Themes at Least 3 Interviewees Identified regarding Why or Why Not It Would Influence Their BL Adoption Decision If Faculty Encouraged Them to Place a Portion of Their Course Online

Theme identified	EM *n*=17 # (%)	LM *n*=22 # (%)	Overall *n*=39 # (%)	Sample response
Why influential				
Faculty are in a similar situation	11 (64.7%)	20 (90.9%)	31 (79.5%)	"They are in the same place as I am." "They've been there, they've done it."
Faculty have similar motivations	0 (0.0%)	3 (13.6%)	3 (7.7%)	"I would assume my fellow faculty member . . . wouldn't be driven by an agenda that threatened the integrity of our teaching."
Why influential (conditionally)				
If I know and/or trust the faculty member	4 (23.5%)	1 (4.5%)	5 (12.8%)	"It would depend on what my opinion was of them before they spoke." 'If it was somebody I knew well, then that would be more persuasive to me."
If they belong to my department	3 (17.6%)	1 (4.5%)	4 (10.3%)	"Especially if it was somebody from my department, on average, I would give it more credit."
Other	4 (23.5%)	1 (4.5%)	5 (12.8%)	

Table 21

Themes at Least 3 Interviewees Identified regarding Why or Why Not It Would Influence Their BL Adoption Decision If Their University Identified Policies and Guidelines regarding BL

Theme identified	EM *n*=17 # (%)	LM *n*=22 # (%)	Overall *n*=39 # (%)	Sample response
Why influential				
University guidelines provide clear guidance and expectations for faculty	3 (17.6%)	5 (22.7%)	8 (20.5%)	"[It would] be frustrating to have absolutely no guidance, not knowing what direction things are supposed to be going."
University guidelines facilitate uniformity	0 (0.0%)	5 (22.7%)	5 (12.8%)	"There needs to be some kind of cement that holds the students' experience across the departments fairly constant."
General statement	2 (11.8%)	2 (9.1%)	4 (10.3%)	"If there weren't guidelines, I probably wouldn't do it." "I would feel intimidated if there were [no guidelines]."
Why influential (conditionally)				
If administrators set broad parameters and gave faculty flexibility to determine course-level policies	6 (35.3%)	4 (18.2%)	10 (25.6%)	"there has to be some standardization in terms of definition and also you can leave it open in terms of how faculty would approach it. . . ."
Why not influential				
General statement	3 (17.6%)	4 (18.2%)	7 (17.9%)	"I don't care." "When I built my first blended [course], there were not guidelines. . . ."
Prefer administrators not direct policy decisions for my courses	1 (5.9%)	3 (13.6%)	4 (10.3%)	"I'd rather not deal with the administration if I can avoid it." "The amount of creativity to create my own is gone."
Other	4 (23.5%)	3 (13.6%)	7 (17.9%)	

Table 22

Themes at Least 3 Interviewees Identified regarding Why or Why Not It Would Influence Their BL Adoption Decision If They Had the Ability to Quickly Upload and Download Media/Materials on Campus

Theme identified	EM *n*=17 # (%)	LM *n*=22 # (%)	Overall *n*=39 # (%)	Sample response
Why influential				
Students need solid infrastructure that consistently works	2 (11.8%)	8 (36.4%)	10 (25.6%)	"If a student has a bad experience or difficulty with the technology, it can squelch their interest and excitement for the content of the course." "When people are sitting down ready to do something, they just want the access to be there. . . ."
Course work and engagement stop when infrastructure fails	5 (29.4%)	2 (9.1%)	7 (17.9%)	"[It's important] to transition between mediums, keep the students' attention, and work with big files and large numbers of students" "The night before the final, iLearn was not working."
General statement	1 (5.9%)	5 (22.7%)	6 (15.4%)	"I only like technology when it works." "It has to be able to handle the job. If it were frustrating. . . . . I would say, 'forget it; I'm not doing it.'"
Fast internet required for specifically identified items	1 (5.9%)	5 (22.7%)	6 (15.4%)	"I do have a lot of stuff on our LMS" "Video, audio, and things that need a lot of bandwidth. . . ."
Time wasted if infrastructure slow/not working	2 (11.8%)	2 (9.1%)	4 (10.3%)	"If it doesn't work, it's going to be a waste of my time, and the student's time. . . ." "I spend a disproportionately high percentage of my time . . . . . working with my students who are dealing with technological problems. . . ."
Why not influential				
Willing to wait for or work around slow internet	4 (23.5%)	1 (4.5%)	5 (12.8%)	"I don't know the difference when people talk about computer speed . . . I think 'you wait around for your computer to do stuff.' That's just not a big deal to me.
Other	3 (17.6%)	2 (9.1%)	5 (12.8%)	

Table 23

Themes at Least 3 Interviewees Identified regarding Why or Why Not It Would Influence Their BL Adoption Decision If Their Institution's Course Catalog Identified BL Classes

Theme identified	EM *n*=17 # (%)	LM *n*=22 # (%)	Overall *n*=39 # (%)	Sample response
Why influential				
Students should be aware which classes are taught in a BL format	2 (11.8%)	4 (18.2%)	6 (15.4%)	"I like that just because they know what to expect" "I think it's the right thing to do in terms of advertising fairly."
Why not influential (but beneficial)				
Students should be aware which classes are taught in a BL format	6 (35.3%)	12 (54.5%)	18 (46.2%)	"But I think it helps students to understand that this course is going to be different than that course." "Some students are going to work well in that format; they're going to enjoy the hybrid style."
General statement	3 (17.6%)	0 (0.0%)	3 (7.7%)	"I think that would be helpful."
Why not influential				
General statement	2 (11.8%)	3 (13.6%)	5 (12.8%)	"I don't care."
BL designations don't need to be in the course catalog	2 (11.8%)	1 (4.5%)	4 (10.3%)	"If you feel like the courses are pretty equivalent, I don't know why you'd need to make separate designations for them." "My department head had not put it in the catalog as a hybrid, so the students all showed up that day, and I said . . . . . this is the way this is going to be. . . ."
Other	1 (5.9%)	3 (13.6%)	4 (10.3%)	

Table 24

Themes at Least 3 Interviewees Identified regarding Why or Why Not It Would Influence Their BL Adoption Decision If Faculty, Departments, or the Institution Made Policy Decisions regarding BL Courses

Theme identified	EM *n*=17 # (%)	LM *n*=22 # (%)	Overall *n*=39 # (%)	Sample response
Why faculty influential				
Faculty are the implementers	2 (11.8%)	6 (27.3%)	8 (20.5%)	"If a faculty member is going to expend time, resources, and knowledge to create and mold and do all of the work, I think that they ought to have a say in who owns it and how it gets used."
General statement	1 (5.9%)	3 (13.6%)	4 (10.3%)	"I would prefer they came from the ground up rather than from the top down."
Why administrators influential				
Administrators facilitate the creation of uniform policies	1 (5.9%)	4 (18.2%)	5 (12.8%)	"There's got to be some uniform agreement. . . ."
Why combination of faculty, department, and administrators influential				
General statement	1 (5.9%)	3 (13.6%)	4 (10.3%)	"Ideally [policies] should come from all three really. Everybody should be able to get together." '"There has to be buy-in at all levels."'
Why combination of faculty and administrators influential				
Administrators can provide guidelines, and faculty can determine details	3 (17.6%)	0 (0.0%)	3 (7.7%)	"There has to be buy in at all levels." "Some of the bigger policies need to be under the administration umbrella, but I would want to retain at the faculty . . . level the choices that flesh that out."
Other	9 (52.9%)	8 (36.4%)	17 (43.6%)	

Table 25

Themes at Least 3 Interviewees Identified regarding Why or Why Not It Would Influence Their BL Adoption Decision If Evaluation Data on the Effectiveness of BL Were Available

Theme identified	EM *n*=17 # (%)	LM *n*=22 # (%)	Overall *n*=39 # (%)	Sample response
Why influential				
Research/data is persuasive	10 (58.8%)	7 (31.8%)	17 (43.6%)	"Assuming it's good data, it's a good study, it would be persuasive." "I spent the first fifteen years of my professional career in education, so doing research, reading research. . . means a lot to me."
Research/data is somewhat persuasive	1 (5.9%)	2 (9.1%)	3 (7.7%)	"It's somewhat persuasive. It makes me think, 'Oh, I should try that. . . .'"
Why influential (conditionally)				
If evaluation data shows a benefit for students	2 (11.8%)	4 (18.2%)	6 (15.4%)	"If you show me, if you do this, your students will learn and retain more, and you can prove it, I'll do it."
Other	6 (35.3%)	8 (36.4%)	14 (35.9%)	

Table 26

Themes at Least 3 Interviewees Identified regarding Why or Why Not It Would Influence Their BL Adoption Decision If One-on-One Professional Development/Training Were Available for Those Adopting BL

Theme identified	EM *n*=17 # (%)	LM *n*=22 # (%)	Overall *n*=39 # (%)	Sample response
Why influential				
Tailored to my needs	7 (41.2%)	6 (27.3%)	13 (33.3%)	"You have particular questions and specific needs to address. . . ."
Human interaction	1 (5.9%)	3 (13.6%)	4 (10.3%)	"I know that I learn better face-to-face." "It helps to talk to people."
More likely to ask questions	1 (5.9%)	2 (9.1%)	3 (7.7%)	"One-on-one you're much less hesitant to ask questions . . . [in a group setting], you feel like you may be vulnerable, you may ask a stupid question." "You don't have to go wasting other people's time."
Prefer training/support while implementing	2 (11.8%)	1 (4.5%)	3 (7.7%)	"I'd rather get the support as needed."
Other	5 (29.4%)	8 (36.4%)	13 (33.3%)	

Table 27

Themes at Least 3 Interviewees Identified regarding Why or Why Not It Would Influence Their BL Adoption Decision If Professional Development/Training Presented in a Face-to-Face Group Setting Were Available for Those Adopting BL

Theme identified	EM *n*=17 # (%)	LM *n*=22 # (%)	Overall *n*=39 # (%)	Sample response
Why influential				
I learn from what others share in a group setting	5 (29.4%)	9 (40.9%)	14 (35.9%)	"We grew so much just from collaboration, from learning from each other. . . ." "the discussion can be richer and the examples . . . in a classroom setting."
I learn from others' questions/concerns	3 (17.6%)	7 (31.8%)	10 (25.6%)	"If I don't know what questions to ask, if I go to a classroom, there's other people that ask questions. . . ." "hearing other people's concerns or issues . . . would be really important."
A group setting is a good place to share initial/general information	2 (11.8%)	1 (4.5%)	3 (7.7%)	"Initially, a face-to-face group format, but . . . when it came down to I've got to change this course from face-to-face to hybrid, then I'd want it to be individual."
Face-to-face instruction facilitates quick feedback/answers	0 (0.0%)	3 (13.6%)	3 (7.7%)	"Would be important to have that type of instantaneous feedback."
Why not influential				
Group instruction may not be sufficiently tailored	3 (17.6%)	2 (9.1%)	5 (12.8%)	". . . it may not fit what you really need yourself."
Other	3 (17.6%)	6 (27.3%)	9 (23.1%)	

Table 28

Themes at Least 3 Interviewees Identified regarding Why or Why Not It Would Influence Their BL Adoption Decision If Online Professional Development/Training Were Available for Those Placing a Portion of Their Course Online

Theme identified	EM *n*=17 # (%)	LM *n*=22 # (%)	Overall *n*=39 # (%)	Sample response
Why influential				
Online training provides flexibility	2 (11.8%)	4 (18.2%)	6 (15.4%)	"I could get [training] at my own time, at my own leisure, when I wanted them, how I wanted them . . . ." "The flexibility to move at my own speed and move quickly through the information that maybe I feel like I've got."
Why not influential				
Lack of face-to-face interaction	2 (11.8%)	7 (31.8%)	9 (23.1%)	"It's just nicer to be able to talk to real people. "I can't see the people, and I can't interact with them. . . ."
Limited ability to get feedback/answers	1 (5.9%)	4 (18.2%)	5 (12.8%)	"If you've got an issue that you'd like to have addressed, it might be more difficult to get at least a fairly rapid answer to your question." "All the body language is gone . . . if I had a piece of paper, I could sketch something out. . . ."
Not sufficiently tailored	1 (5.9%)	2 (9.1%)	3 (7.7%)	"I would worry . . . if an online presentation would be developed in a one-size fits all type of an approach where I might have specific needs and concerns or applications that wouldn't be addressed . . . ."
General statement	2 (11.8%)	2 (9.1%)	4 (10.3%)	"I don't see how that would benefit me."
Other	10 (58.8%)	7 (31.8%)	17 (43.6%)	

Table 29

Themes at Least 3 Interviewees Identified regarding Why or Why Not It Would Influence Their BL Adoption Decision If Technical Support Were Available for Those Placing a Portion of Their Course Online

Theme identified	EM *n*=17 # (%)	LM *n*=22 # (%)	Overall *n*=39 # (%)	Sample response
Why influential				
I feel technologically inadequate	5 (29.4%)	6 (27.3%)	11 (28.2%)	"I'm not a computer person."
General statement	3 (17.6%)	7 (31.8%)	10 (25.6%)	"Technical support has to be there." "I really appreciate our university's effort to give me the technical support that I need. . . ."
Technical support saves time	1 (5.9%)	3 (13.6%)	4 (10.3%)	"If you run into those situations and you don't have any help. . . you're probably going to spend a lot of time doing things that. . . don't benefit the class. . . ."
Technological functionality is important	2 (11.8%)	2 (9.1%)	4 (10.3%)	"If students can't get on to meet together in Google Hangouts or if they can't get on because the management system is down, that's a big problem."
Why not influential				
I have sufficient technological capacity	4 (23.5%)	3 (13.6%)	7 (17.9%)	"I'm familiar with computers; I can do it."
Other	3 (17.6%)	0 (0.0%)	3 (7.7%)	

Table 30

Themes at Least 3 Interviewees Identified regarding Why or Why Not It Would Influence Their BL Adoption Decision If Pedagogical Support Were Available for BL Adopters

Theme identified	EM *n*=17 # (%)	LM *n*=22 # (%)	Overall *n*=39 # (%)	Sample response
Why influential				
General statement	3 (17.6%)	4 (18.2%)	7 (17.9%)	"Having someone come in would be fantastic. . . ." "I have a lot of pedagogical support, not only from the department, but from the university in general. . . It has been very helpful."
Pedagogical support would be useful when designing the online element of BL	4 (23.5%)	4 (18.2%)	8 (20.5%)	"I wouldn't mind having a second set of eyes on my course design just in terms of how well I've translated things from the classroom format to an online format." "It is great though to see examples."
Why not influential				
I have sufficient pedagogical experience	6 (35.3%)	4 (18.2%)	10 (25.6%)	"I've had a lot of experience adapting pedagogy. . . ." "I did a PhD program in instructional design. . . ." "I'm a teacher, and that's a way of teaching." "I teach chemistry and it's pretty straightforward what you need to do for chemistry."
Other	3 (17.6%)	4 (18.2%)	7 (17.9%)	

Table 31

Themes at Least 3 Interviewees Identified regarding Why or Why Not It Would Influence Their BL Adoption Decision If Financial Stipends Were Available for Those Who Adopt BL

Theme identified	EM *n*=17 # (%)	LM *n*=22 # (%)	Overall *n*=39 # (%)	Sample response
Why influential				
It would provide compensation for the additional work	2 (11.8%)	3 (13.6%)	5 (12.8%)	"There's an added workload to make that transition . . . , so the added financial incentive or course reduction provides compensation for that."
General statement	0 (0.0%)	4 (18.2%)	4 (10.3%)	"It would be nice. . . ."
Why influential (conditionally)				
It depends on the amount of the stipend	1 (5.9%)	4 (18.2%)	5 (12.8%)	"It would depend on the amount." "I'm 56, and people my age, you have to pay them an awful lot."
Why not influential				
Need time more than money	2 (11.8%)	4 (18.2%)	6 (15.4%)	"Even if it was a great stipend, . . . I don't feel like I have the time. . . ."
I feel comfortable with my financial situation	2 (11.8%)	2 (9.1%)	4 (10.3%)	"The salary here with the cost of living works out pretty nicely."
Money is not motivating	1 (5.9%)	3 (13.6%)	4 (10.3%)	"I could use more money, but it's not my motivator. . . ." "Money has never been a huge motivator for me." "I didn't become a teacher because of the money. . . ."
Other	5 (29.4%)	4 (18.2%)	9 (23.1%)	

Table 32

Themes at Least 3 Interviewees Identified regarding Why or Why Not It Would Influence Their BL Adoption Decision If Temporary Course Load Reductions Were Available for Those Who Adopt BL

Theme identified	EM *n*=17 # (%)	LM *n*=22 # (%)	Overall *n*=39 # (%)	Sample response
Why influential				
I need time in order to adopt BL	5 (29.4%)	3 (13.6%)	8 (20.5%)	"That would give me more time to implement and understand better what I want to do to make [BL] successful"
Time is important	1 (5.9%)	6 (27.3%)	7 (17.9%)	"Time is the big factor for just about anything."
I would like time for things other than BL adoption	2 (11.8%)	4 (18.2%)	6 (15.4%)	"That can open up additional opportunities for developing other materials or getting involved in other research projects and things like that."
I need more time	3 (17.6%)	1 (4.5%)	4 (10.3%)	"There's just always a feeling of being extremely busy and having a hard time getting to things that you want to get to."
Why not influential				
I enjoy teaching	2 (11.8%)	1 (4.5%)	3 (7.7%)	"I love teaching; I don't want a load reduction."
Other	4 (23.5%)	7 (31.8%)	11 (28.2%)	

Table 33

Themes at Least 3 Interviewees Identified regarding Why or Why Not It Would Influence Their BL Adoption Decision If Their Institution Valued BL Adoption during Tenure/Promotion Determinations

Theme identified	EM *n*=17 # (%)	LM *n*=22 # (%)	Overall *n*=39 # (%)	Sample response
Why not influential				
Already have tenure	7 (41.2%)	7 (31.8%)	14 (35.9%)	"I have CFS already."
Not concerned about getting tenure at BYU-I	5 (29.4%)	7 (31.8%)	12 (30.8%)	"I don't feel that worried about CFS. . . ." "At our institution we don't really have tenure in the strictest sense."
Tenure is based on multiple factors, and BL will only be one	1 (5.9%)	2 (9.1%)	3 (7.7%)	"It just seems to me like that would be one element in a CFS binder."
Other	3 (17.6%)	6 (27.3%)	9 (23.1%)	