

2015

Impacts on Faculty Workload During a Learning Management System Transition

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Walden University

College of Management and Technology

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Karla Jones

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Walden University
2015

Abstract

Impacts on Faculty Workload During a Learning Management System Transition

by

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MA, East Carolina University, 2001

BS, Mount Olive College, 1997

Dissertation Submitted in Partial Fulfillment

Of the Requirements for the Degree of

Doctor of Philosophy

Information Systems Management

Walden University

August 2015

Abstract

Management professionals at many colleges are transitioning to new learning management systems (LMS), such as Moodle, for reasons such as lower costs, greater outreach, and student preference. Transitioning to a new LMS may result in faculty problems with learning a new technology platform in addition to teaching. The purpose of this study was to explore the impact that an LMS transition had on faculty attitudes, experiences, and workload. The conceptual framework of the study was the unified theory of acceptance and use of technology and the diffusion of innovation theory. A phenomenological design was employed with a purposeful sample of 13 faculty who had transitioned a course from Blackboard to Moodle during 2009-2013. Interview data were analyzed through open coding, resulting in 7 emergent themes: time, stability, usability of features, preparation, support, support staff, and benefits. These themes were substantiated by observation of member checking and use of an external auditor. Results indicated that when faculty were required to transition to a new LMS, there were impacts to their workload such as extra time requirements for course development, learning the new LMS, delivering instruction, and technology training. All 13 faculty expressed a need for additional support in the form of either a course release, compensation, or mentoring. Administrators who apply these findings may influence positive social change through a better understanding of the complexity of an LMS transition. This new knowledge may result in increased alignment between administration and faculty, improvement of the student's experience, and improved faculty job satisfaction.

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Dedication

I would like to dedicate this dissertation and degree to my father Willard “Junebug” Thompson. Without his love, encouragement, and guidance, I would have never started on this journey. He told me many times during his life that “education is the one thing you cannot lose and that no one can ever take away from you.” He made me believe I was loved and could do anything I set my mind to. He always asked me how I was doing with my degree, and encouraged me to keep going. My father passed away in December of 2010, but I knew he was very proud of my accomplishments. I am grateful for all of his support. I am very proud to be his daughter.

I would also like to dedicate this dissertation and degree to my husband Martin Varnell. He was there every step of the way when I needed support. He also provided encouragement for me to accomplish my dream. He was very supportive both emotionally and physically. He helped do whatever was necessary, to include housework, grocery shopping, or just someone to bounce ideas off of. I love you and thank you!

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Table of Contents

List of Tables	vi
List of Figures	vii
Chapter 1: Introduction to the Study.....	1
Background of the Study	3
Learning Management Systems	5
Coastline Community College	7
Problem Statement	9
Purpose of the Study	10
Research Question	11
Theoretical Foundation	11
Nature of the Study	13
Definitions.....	14
Assumptions.....	15
Scope and Delimitations	15
Limitations	16
Significance of the Study	17
Summary and Transition.....	18
Chapter 2: Literature Review	19
Literature Search Strategy.....	19
Unified Theory of Acceptance and Use of Technology and Faculty.....	21
Diffusion of Innovation Theory and Faculty	25

Educational Change and Distance Learning	26
Effects of Distance Learning Programs and Courses on Faculty	28
Stress	28
Workload.....	30
Training Needs.....	31
Faculty Support.....	33
Lack of Financial Support.....	35
Learning Management System Feasibility Study	38
Effects of Learning Management System Utilization on Faculty.....	39
Summary and Conclusions	44
Chapter 3: Research Method.....	46
Research Design and Rationale	46
Role of the Researcher	48
Methodology.....	50
Participant Selection Logic	50
Instrumentation	52
Pilot Study.....	52
Procedures for Recruitment, Participation, and Data Collection	53
Data Analysis Plan.....	54
Issues of Trustworthiness.....	56
Credibility	56
Transferability.....	57

Dependability	58
Confirmability.....	58
Ethical Procedures	59
Summary	60
Chapter 4: Results	61
Pilot Study.....	62
Research Question	63
Research Setting.....	63
Demographics	65
Data Collection and Analysis.....	66
Participants.....	66
Data Collection	67
Data Analysis	68
Evidence of Trustworthiness.....	70
Credibility	70
Dependability	70
Confirmability.....	71
Transferability.....	71
Trustworthiness Summary	72
Study Results	72
Theme 1: Time.....	73
Theme 2: Stability.....	75

Theme 3: Usability of Features	77
Theme 4: Preparation	83
Theme 5: Support.....	85
Theme 6 Support Staff	88
Theme 7: Benefits	90
Summary	91
Chapter 5: Discussion, Conclusions, and Recommendations	92
Overview of the Qualitative Study	92
Interpretation of the Findings.....	93
Limitations of the Study.....	98
Recommendations.....	99
Recommendations for Future Research	106
Implications.....	107
Reflections	108
Conclusion	109
References.....	110
Appendix A: Interview Guide.....	124
Appendix B: Email Invitation.....	125
Appendix C: Full Study Email Reminder.....	126
Appendix D: Full Study Consent Form	127
Appendix E: Confidentiality Agreement	127
Appendix F: Pilot Study Email Invitation	129

Appendix G: Pilot Study Email Reminder.....130
Appendix H: Pilot Study Consent Form131

List of Tables

Table 1. Publication Dates of Source Material Used in the Literature Review	20
Table 2. Analysis of Document Type.....	20
Table 3. Faculty Responses about What Works Well in Moodle Compared to Bb.....	78
Table 4. Faculty Comments on Features That Do Not Work Well in Moodle.....	80

List of Figures

Figure 1. Age distribution.....66

Figure 2. Teaching Program Distribution.....67

Chapter 1: Introduction to the Study

There is a lack of research available with regard to the impact on faculty during a learning management system (LMS) transition. However, there is significant research on how faculty are affected by teaching online. For example, 85% of faculty at public institutions, 72% of faculty at private institutions, and 66% of faculty at community colleges stated that there is additional time added to their workload when teaching online (Windes & Lesht, 2014). Faculty believe that the time utilized for distance learning (DL) program development and planning for DL courses is extensively more than it is for traditional courses (Kampov-Polevoi, 2010). Faculty must spend extensive time and exert additional effort when developing a course for online delivery due to the difference in teaching modality in online courses. In addition, faculty may not be compensated for the additional time creating materials for an online course (Kampov-Polevoi, 2010). When DL is coupled with an LMS migration, there are additional factors that impact faculty workload and teaching experience. In this study, I examined the impact that a technology initiative involving LMSs had on faculty attitudes, experiences, and workload.

The majority of LMSs, such as Blackboard (Bb), are constructed to be faculty oriented and deliver the course content to learners. In contrast, Moodle is an LMS that is designed around the social constructivist theory (Moodle, 2012). This theory of instruction implemented in online learning has students involved in actively constructing new knowledge. Students are also involved by explaining what they have learned to others. Moodle adopts a more subjective stance to knowledge creation (Barr, Gower, & Clayton, 2007). Unal and Unal found that “it can be concluded that in almost every

module or function comparison that was made, Moodle was favored by course participants over Blackboard” (Unal & Unal, 2011, p. 19). However, this may not be true of faculty who are required to use Moodle. When online faculty are engaged and establish strong associations, they feel more responsible. This results in faculty not wanting to upset or frustrate others with whom they have a relationship (Puzziferro & Shelton, 2009). When trying to provide new and innovative technology resources to meet program growth needs, faculty can be resistant to change for many reasons (Matrosova-Khalil, 2013). Many times the impact on a faculty member when adopting change, such as a new LMS, is not entirely known and is not addressed in the literature.

The results of this study may be beneficial to educational administrators planning an LMS migration or technology transition with regard to understanding the effects of changes on faculty members and issues affecting stakeholders before, during, and after the transition. Therefore, administrators who apply these findings may influence positive social change through helping faculty and staff better understand the complexity and impacts on faculty during an LMS transition. This may result in increased alignment between administration and faculty, improvement of the student’s experience with courses, and improved faculty job satisfaction in relation to the impacts on faculty members. After reviewing the findings of this study, faculty, instructional designers, and administrators may understand the effects of an LMS migration and plan accordingly. According to Moeller and Reitzes (2011), only 23% of teachers believe they are equipped to incorporate technology into their teaching process. Of those who do integrate technology into their lessons, it is primarily to present information, not engage in

collaborative activities (Moeller & Reitzes, 2011). Students may also be affected by this lack of technology integration. According to Moeller and Reitzes (2011), 43% of students were underprepared to utilize technology in the future. Technology integration is not likely to be successful unless the culture of the school, led by administration, is supportive of the technology (Moeller & Reitzes, 2011). The results of this study may aid administrators in providing the necessary culture for supporting their faculty during an LMS change.

Background of the Study

Twenty-five percent of students were DL students at Coastline Community College (CCC), a pseudonym, in 2005. During that time, administrators created a shared services *learning community*. This learning community was a collaboration with three other community college faculty and staff in the southeast. A server was shared by the stakeholders at each of the four colleges which housed the LMS. This server was outsourced through Bb. There were select areas of DL activity and innovation; but for the most part, the strategic development and enhancement of courses was isolated. By 2009, the number of students served in the DL format increased by 269% at CCC, and the number of courses offered increased by 195%. Growth of the course offerings and student enrollment has progressively increased. In the 2005-2009 time period, the academic administration was not well versed in the area of DL. The three deans had not taught a DL course or evaluated a faculty member teaching online in his or her area. Of the six department chairs on campus, only two had taught courses with distance technology. Only one department chair had evaluated faculty who were teaching DL

courses. From 2005 until 2009, there was no accountability for course quality in the online program. In addition, there was no identification and collaboration for development or updating the DL courses. Professional development in the area of DL pedagogy, instructional technology, or best practices were not required of faculty. In 2009, due to the increases in courses and enrollment, the administration decided to introduce more rigor into the DL program.

CCC administration did not require professional development for faculty prior to teaching online. The college administration did offer professional development for the transition to Moodle, but it was not required. In spite of these circumstances, more than 50% of CCC learners take at least one DL course. More than 80% of those students take a web supplemented course.

DL students, like faculty, may not utilize the services that are provided to them, and these services are often less developed to what is offered to the campus-based students. For example, CCC's staff offer sessions to students on how to utilize the LMS but very few students take advantage of these opportunities. In addition to taking advantage of existing services, students should be involved in determining what services should be added or improved. Services should be provided to students without restriction to time and place (Pullen, 2010). In addition, data from the Pullen study (2010) suggested many college and university leaders are struggling to offer support services to DL students that are similar in quality to what is offered to campus-based students.

Resources are not available to students and staff at CCC that are available at larger institutions. When students are not encouraged, they may leave the college or find

a college that offers more support. The Pullen study (2010) suggested that DL is something that has great appeal for students and is a preference for students (Pullen, 2010). Digital tools and faster technology appeal to the younger generation of learners. Although students are increasingly interested in enrolling in DL courses, the community colleges do not seem able to provide the corresponding support services necessary. Online students require support services that will aid in their success and provide clear guidance (Pullan, 2010). CCC's students are no exception to these trends.

CCC's administration can continue to build on its strong foundation and gain benefits strategically by enhancing activities in DL. CCC's DL plan includes:

- Increased opportunities for students to transfer with completed associate degrees to universities in the southeast.
- Increasing the number of high school students associated with a regional Earn to Learn initiative who directly enroll in CCC after graduation or while in high school.
- Extending CCC's DL offerings in the strategic focus fields identified in the mission.
- Enhancing the college's faculty teaching skills and pedagogical approaches.

Learning Management Systems

An LMS such as Moodle can be effective at accommodating complex learning activities with ease of use (Barr et al., 2007). Some faculty believes that an LMS can help facilitate learning effectiveness. However, there are some researchers who argue that

LMSs merely support educators with the administration and dissemination of course material. Good LMSs should also include collaboration, interaction, and participation (Barr et al., 2007). An effective LMS should reduce difficulties such as deficiency of system dependability, absence of connectivity, insufficient hardware and software, and lack of technical support by providing a manageable and accessible format. This structure permits educators and learners to work with minimal assistance. Faculty that utilize Moodle effectively can minimize these problems because the LMS was created for ease of use and faculty independence (Barr et al., 2007).

Current researchers have shown that educators do not implement new instructional methods or innovations for financial gain or as a result of professional development. Instead, new teaching methods are adopted based on the inherent fulfillment that the teacher obtains from doing their work more successfully (Barr et al., 2007). Researchers have also shown that an LMS can reduce absenteeism and increase overall performance of students (Arulchelvan, 2012). Absenteeism and overall student performance are important indicators and predictors of success of students at CCC Community College. Beginning in spring of 2014, all courses at CCC will be given a Moodle LMS presence. Having an active presence in online courses means that the faculty will post lecture notes and grades in a timely manner (defined by CCC administration as 10 days). In addition, faculty must be active in the course and respond to student questions within 48 hours. CCC's administration does not require active discussions or weekly feedback to students.

Coastline Community College

CCC is an equal admission, two campus, associate degree granting public institution. CCC offers students associate degrees, diplomas, and certifications in liberal arts and workforce development programs. CCC also offers students an early college for students in Grades 9-12. They attend high school on a college campus and attend five years of high school. When they graduate, they also graduate with an associate's degree. According to the college's fact book, an average of 25.4% of area high school graduates selected CCC as their institution of choice. Most learners at CCC are between the ages of 20 and 29 years. Students choosing to enroll in DL courses continue to increase. However, the number of students electing to take traditional courses on the New Bern and Havelock campus has not changed significantly. Over the past five years, the quantity of DL options for students has increased by 48.4% while the number of hybrid courses provided to learners has increased by 42.5%.

During this same time, the number of other instructional opportunities offered to students (cooperative learning, independent study, and digital media courses) has diminished by 40.4%. The quantity of traditional courses offered, however, has remained relatively stable, increasing by only 6.7% since the 2006-2007 year. Even with the rise in student learning opportunities, traditional delivery method courses continue to include a higher percentage of learners, but the DL courses are not far behind. If, however, enrollment numbers for hybrid and DL courses were merged into one single DL group, they would far exceed the traditional delivery method course enrollments. More than 80% of the learners at CCC reside from the state where the college is located. The

remaining students come from 47 other states. These out-of-state students could feasibly be attributed to persons in the military population providing their permanent home address rather than their present day local address.

In 2009, in a holistic effort to improve the DL experience for students, the college administration decided to improve the LMS utilized to deliver instruction and services to students. The college administration transitioned to Moodle as the sole LMS, requiring faculty to learn a new system and recreate all DL course content in the new LMS. However, neither CCC administrators nor faculty knew at that time what the impact of the transition would be to faculty. According to the unified theory and acceptance of use (UTAUT) model, intention of a faculty member to use a particular technology is a consequence of the perceived usefulness of the technology. Intention of a faculty member to utilize the technology is also affected if it is considered easy to use (Venkatesh, Morris, Davis, & Davis, 2003). CCC's administration was not sure how faculty would view the usefulness or ease of use of the technology.

In addition, the diffusion of innovation theory framework shows that faculty will adopt innovations at different rates and will also play different roles in the process. For example, some faculty will be considered innovators while others are much slower to adopt the technology and are considered laggards or late adopters (Rogers, 2003). The literature does not specifically address the impacts of an LMS migration on faculty. The results of this study include the effects on faculty at CCC during an LMS migration and suggestions as to how support can be provided to reduce potential adverse impacts.

Problem Statement

LMSs have been used for more than a decade and many college and university stakeholders have utilized them to provide instruction, store instructional content, and communicate grades and other information. In many institutions, administrators are choosing to transition to a new LMS, such as Moodle, which is more cost effective, provides additional tools for faculty and student utilization, and is student preferred. The problem is that CCC's administration did not believe that the impact to faculty during this LMS migration would be significant and therefore did not provide incentives or additional support to faculty during the LMS migration. Several of the college administrators believed that preparing to teach online is no different than preparing to teach in a physical classroom. Therefore, the administration did not create a unified plan to support faculty during the migration from Bb to Moodle.

When faculty transitioned courses from Bb to Moodle, many courses were not completed for students by the start of the semester. Although, the courses were provided to the students, faculty were still developing the course at the same time they were teaching it. In addition, several courses were not available for delivery online at all. This resulted in unexpected schedule changes for students, as well as, faculty.

Many faculty were not trained in how to use the new LMS and struggled teaching during the first term with Moodle. Since the administration expressed that developing an online course was no different than developing an in-person course, the college only provided optional Moodle training for faculty. There is a gap in the literature that addresses impact to faculty when transitioning to a new LMS. Therefore, there was not

any evidence to share with administration on why additional faculty support was needed. In addition, the college administration did not allow release time for development nor compensated faculty for course development and migration. This resulted in faculty not being prepared to teach in Moodle and the courses not being completed before the semester began. There was minimal instructional design and technical support for the instructional initiatives related to the LMS transition. Faculty were not required to attend training on how to make the Moodle course pedagogically sound or how to utilize the tools effectively.

Purpose of the Study

The purpose of this phenomenological study was to identify and examine the implications to faculty who teach DL and must migrate from the LMS Bb to Moodle. I employed the phenomenological study methodology, a type of qualitative design, to examine faculty at CCC, who previously taught DL classes and migrated courses from Bb to Moodle. Through this study, I discovered some of the unique experiences of faculty when they transition to a new LMS. The phenomenological method was used in an effort to provide a deeper understanding of the effects on faculty members.

An important motive for a researcher to undertake qualitative research, is to become more proficient with a phenomenon of interest (Trochim, 2006). Qualitative data can be very diverse in nature. The research originates with the development of general questions that assist to guide the research but are not planned to be either stagnant or restricting for the researcher. As the researcher commences to collect data, theoretical

concepts are categorized (Trochim, 2006). I utilized in-person interviews and field notes for assessing opinions and trends related to this study.

Research Question

Singleton and Straits (2010) documented that research questions should meet two fundamental conditions: they should be interesting and researchable. Singleton and Straits defined researchable as answerable through empirical research. The central research question for this study is: How did the transition from Bb to Moodle impact the faculty member's workload, attitudes, and instructional practices at CCC from 2009-2013? The research question informed from the literature review of this study was based on the UTAUT and diffusion of innovation theory.

Theoretical Foundation

The impact of the LMS change on faculty at CCC was unknown. The theoretical framework for this study began with an exploration of current studies based on the concept of user acceptance of technology. The concept of user acceptance of technology was proposed by Venkatesh et al. (2003) in the UTAUT. There are eight theoretical models outlined in UTAUT. They are theory of reasoned action (TRA), technology acceptance model (TAM), motivational model (MM), theory of planned behavior (TPB), and decomposed TPB, model of PC utilization (MPCU), innovation diffusion theory (IDT), and social cognitive theory (SCT). There are four constructs that are significant as direct determinants of user acceptance and usage behavior. The four constructs are performance expectancy, effort expectancy, social influence, and facilitating conditions (Venkatesh et al., 2003). In addition to the exploration of UTAUT in Chapter 2, there is

also an examination of diffusion of innovation theory. This theory identified specific roles faculty take when adopting new technology to include: innovators, early adopters, laggards, change agents and opinion leaders (Rogers, 2003). Finally, I presented a review of the literature concerning current technology transitions relating to faculty. I also presented a review of how well faculty adopt technology, and the role faculty plays in that adoption.

Colleges and university administrators who decide to offer DL programs should have strategic management plans that guide the creation of the course development process (Ubachs, 2009). These plans should be a collaboration between the faculty and the administration. These plans should also take into account the impacts to a faculty member during the development. For example, administration should ensure that before a DL program is released, that the faculty was comfortable using online learning technology and understand its practicality as a teaching tool. In addition, faculty should be provided with holistic training initiatives on how to teach with technology. If strategic management plans are not created and shared, the results may be that faculty have a lack of understanding regarding their roles and the role of others. In addition, there may be issues regarding pedagogy, commitment, and ownership (Masalela, 2011). There was not a strategic management plan at CCC during the LMS transition.

Using and integrating technology into the classroom has shown to support student centered learning. Teachers and school administrators will most likely adopt technology when: (a) it supports student centered practices that already exist and helps to resolve a problem or enhance a challenge, (b) it is a systematic initiative, and (c) professional

development is provided to teachers along with regular support (Moeller & Reitzes, 2011). However, the impact on faculty in relationship to time, training, and stress during this development and implementation was not known.

Nature of the Study

A phenomenological method was utilized in the research design for this study. Phenomenological studies are considered qualitative research. A phenomenological approach is most appropriate for studying affective, emotional or human experiences (Merriam, 2014). Different from a quantitative study that involves the examination of data and presents its findings statistically, in this qualitative study I examined several issues in greater depth and provided explanations for those findings (Yin, 2009). Because of this, a qualitative methodology was ideal for the extensive study of the phenomenon or issue which was the impacts to faculty during an LMS transition (Yin, 2009).

This phenomenological study included faculty from a medium sized community college in the southeastern United States. I examined faculty experiences about their transition to a new LMS. Moodle was the new LMS that was being implemented at the college. I conducted in-person interviews over a two week period. I recorded and transcribed these interviews. This data collection process provided opportunities for open ended discussions that gave a new direction. A phenomenological study methodology is appropriate for this study because the focus is on a single college rather than multiple colleges or universities. I selected participants based on their knowledge and experience with the LMS transition. I entered collected data into NVivo10, a qualitative data

management software program. I examined data line by line and analyzed emerging codes.

Definitions

Blackboard: Blackboard “is a company that provides learning, mobile, communication, and commerce software and related services to clients including learning providers, corporations, and government organizations. The company has been a leader in the development of Internet based learning software. As of December 2010, Blackboard software and services were used by over 9,300 institutions in more than 60 countries” (Blackboard INC, 2007-2012, Who We Are section, para 3).

Coastline Community College: Coastline Community College may be referred to as Coastline Community College, CCC, or The College. It is a pseudonym.

Distance learning, distance education, online learning, web-based learning, and eLearning: Distance learning is learning that takes place at a different location than the instructor and is conducted utilizing technology (Moore & Kearsley, 2012). References to any of the above terms should be considered interchangeable and have the same meaning.

Learning management system: “A learning management system (LMS) is a software application or web-based technology used to plan, implement, and assess a particular learning process. Typically, an LMS provides faculty with a way to create and deliver content, monitor student participation, and assess student performance” (Learning Management System, 2012, Definition section, para 1).

Moodle: “Moodle is a Course Management System (CMS), also known as a Learning Management System (LMS) or a Virtual Learning Environment (VLE). It is a free web application that educators can use to create effective online learning sites” (Welcome to the Moodle Community, 2012, What is Moodle section, para 1).

Workload for CCC Faculty: Currently full time faculty teach 18-20 credit hours each semester. The college requires a minimum of 5 office hours on campus each week. Faculty must physically be on campus a minimum of 30 hours a week and at least four days a week. A credit hour is defined as 16 hours of instruction per term. Faculty must also contribute up to 45 hours a semester in service to college, which can include activities such as advising, club work, and community work. There is no consideration for course development.

Assumptions

The basic assumption I had during this phenomenological study was that the faculty would have common themes in their experience with this LMS transition. I also assumed that the faculty who were interviewed had attitudes and opinions about how the LMS transition was delivered. Additionally, I assumed that the faculty were not familiar with migrating course material from Bb to the LMS Moodle. Finally, participation in this study was voluntary. Therefore, I assumed that the faculty provided truthful reflections.

Scope and Delimitations

Specific aspects of the research problem I addressed in this study were to identify and examine the impact to faculty during an LMS transition and to establish what is needed by faculty to limit the negative impact to them. This focus was chosen to aid

leaders in educational administration with information necessary for successful LMS implementations while ensuring faculty needs were understood. The scope of this study only included investigating faculty experiences with transitioning to a new LMS at CCC. I chose faculty instead of students because research exists regarding students' experiences with Moodle. Only faculty who developed and instructed DL utilizing Bb and Moodle at CCC were able to participate in this study. The size of the sample was small, only 13 faculty participated in the full study. Only full time faculty were asked to take part in the study. Therefore, this phenomenological study was limited to one college from 2009-2013. However, each of the instructional units of the college is represented. The study did not include findings related to the technology competency of faculty. This study only included web based DL. Therefore, I did not consider or reference in this study any DL that was not delivered in an LMS.

My purpose for this phenomenological study was to assist faculty and administrators in higher education in identifying the impacts to faculty during an LMS transition. As with all phenomenological studies, my interpretation of the data as the researcher is conveyed. In many instances, due to limited sample size, phenomenological study research is not generalizable to other populations.

Limitations

Limitations in qualitative research are weaknesses within the research and are nearly impossible to control (Merriam, 2014). Thirteen faculty from CCC participated in the study and transitioned a course from Bb to Moodle for the first time from 2009-2013. All faculty at CCC, who developed and taught DL with Bb and Moodle were not able to

take part in this study. Faculty that did not participate either did not agree to participate or they did not transition a course to Moodle. The results were restricted to the honesty of the participants who participated in the study. The results were confined to the time the study took place which was from 2009-2013. All adjuncts and contractual faculty may not have developed and migrated the course material from Bb to Moodle, and therefore were not asked to participate. In addition, I transcribed the interviews. However, the interview transcripts were member checked and reviewed by a third party reviewer. Despite the limitations of this study, the results provided feedback on the impact of a technology transition on faculty. These results can be utilized by academic leaders to better support faculty and the learning process.

Significance of the Study

The purpose of this study was to examine the impacts of an LMS migration on full time faculty. Study results may help administrators, and instructional designers meet the needs of faculty during similar technology projects. The results may also help administrators when determining faculty workload, pay, and training requirements. In addition, this study may provide training and support needs of faculty for future technology migrations and projects. Thus, the result may be higher program success and faculty satisfaction.

The results of this study may contribute to positive social change by informing college administrators about the impacts to faculty during an LMS migration. Additional support may be provided to faculty, if administrators are aware of the needs of faculty. These administrators may be able to plan and prepare more efficiently when migrating to

another LMS. Knowing how faculty perceive or misperceive transitioning to a new LMS will help guide professionals in better educating and planning for this type of change. With an increased awareness of the impacts to faculty, administrators can better plan for an LMS transition and shield faculty from the negative impacts it creates. In addition, positive social change may also occur with faculty who are required to transition to a new LMS. If necessary support and resources are available to faculty, their classes and students may be positively impacted.

Summary and Transition

Social change, as the result of technology improvements, is not always what is best for all stakeholders involved or impacted. The impact on society during an introduction of technology is more contingent on that society's present environment and its motivation to cultivate the change produced by the technology (Lockett, 2010). During this study, I analyzed the impacts of an LMS migration on faculty. The study results add to the existing research and provides insight for administrators, faculty, and instructional designers who are contemplating an LMS migration. Chapter 2 includes literature related to faculty acceptance of technological change, how it is accepted, and how DL has already impacted faculty, as well as, use of the UTAUT and the diffusion of innovation theory.

Chapter 2: Literature Review

The purpose of this research study was to determine the impact of an LMS transition on faculty at CCC. In order to accomplish this purpose, a complete understanding of the concepts and theories related to technology acceptance was necessary. Moustakas (1994) described the review of the literature related to a phenomenological study as an integral part of the literature review. There are three components to this chapter's structure: a description of the literature search strategy, the literature review itself, and a summary.

Literature Search Strategy

I examined and included in this chapter the UTAUT and diffusion of innovation theory. I conducted an exhaustive search of the literature using resources from two libraries to include Walden University Library and CCC's Library. I searched the following databases for this literature review: Academic Search Premier, Business Source Premier, CINAHL, Computers and Applied Science, Learning Research Complete, Eric, Inspec, Proquest, and Teacher Reference Center in addition to Google's search engine. I used the following keywords to perform various searches: Moodle, Bb, LMS, course management system, faculty, UTAUT, diffusion of innovation, technology, transition, migration, change, workload, and impact. I selected the material for this literature review from topic specific books, textbooks, government and state reports, academic and professional journals, and the World Wide Web. Two research streams are presented: a presentation of theories to include technology acceptance and diffusion of

innovation and a discussion of relevant literature on the impacts of DL technology utilization and technology transition to faculty.

The purpose of this chapter is to investigate the impacts of DL technology utilization and technology transition to faculty through literature review. Trochim (2006) suggested that a literature review provide contextual and theoretical reference for this research. Analysis of Table 1 shows that 86% of the sources were published between 2009-2014. Journals, reports, and conference proceedings accounted for more than 79% of the material used in the literature review. Texts authored by subject matter experts accounted for 21% of the literature review materials. Items published prior to 2009 accounted for 14% of the literature review materials.

Table 1

Publication Dates of Source Material Used in the Literature Review

Date of references	Number of references	%
2009 to 2014	84	86
2004 to 2008	6	6
Prior to 2004	8	8

Table 2

Analysis of Document Type

Document type	Number of references	%
Journal	60	61
Reports/Conference Proceedings	18	18
Texts by Subject Matter Experts	20	21

Unified Theory of Acceptance and Use of Technology and Faculty

DL programs and courses at CCC are now a critical component of the overall offerings and financial stability of the college. Therefore, the transition to Moodle needed to occur systematically and without technology issues that may affect a student's desire to stay at the college. The administration at CCC did not give faculty a choice about migrating from the LMS Bb to Moodle; however, they did give faculty a choice about when they would migrate their materials to Moodle. The migration included early adopters and faculty who did not move their content to Moodle before Bb was terminated. The impact on a faculty member related to the utilization of Moodle could be affected by the willingness of faculty to accept this LMS change.

The acceptance of technology is widely discussed and studied. Various models have been developed, and research conducted on the acceptance of technology. Conventional models relating to technology acceptance include the theory of reasoned action (TRA) created by Fishbein and Ajzen in 1975, the technology acceptance model (TAM) created by Davis, Bagozzi, and Warshaw in 1989, the motivational model (MM) produced by Davis, Bagozzi, and Warshaw in 1992, the theory of planned behavior (TPB) designed by Ajzen in 1991, a model combining the technology acceptance model and the theory of planned behavior (C-TAM-TPB) established by Taylor and Todd in 1995, the model of PC utilization (MPCU) created by Thompson, Higgins, and Howell in 1991, the innovation diffusion theory (IDT) created by Rogers in 2003, and the social cognitive theory (SCT) created by Bandura in 1986. In 2003, Venkatesh et al. compared and synthesized the above models to develop the UTAUT model. According to

Venkatesh and his UTAUT model, behavioral intention to use a technology is a consequence of perceived usefulness and ease of use. Venkatesh presents the UTAUT with four paradigms that are considered a direct determination of user acceptance and behavior: performance expectancy, effort expectancy, social influence, and facilitating conditions.

Performance expectancy is the first paradigm in UTAUT. Performance expectancy is how an individual feels about using the technology aid in obtaining achievements in job performance. This paradigm is the most compelling predictor of intention in both voluntary and involuntary settings. Performance expectancy is based on five central concepts: perceived usefulness, extrinsic motivation, job fit, relative advantage, and outcome expectations. It should also be noted that this composition is the most convincing predictor in determining the user's behavioral intentions. In addition, gender or age did not influence the strength of intentions (Venkatesh et al., 2003).

Effort expectancy is the second paradigm in UTAUT. Effort expectancy is how easy the use of the system is. Effort expectancy is an important construct in both voluntary and mandatory settings. It is based on perceived ease of use, complexity, and actual ease of use. Gender and age did influence ease of use. Specifically, ease of use was also influenced by women, older users, and users with minimal computer experience (Venkatesh et al., 2003).

According Huang, Deggs, Jabor, and Machtmes (2011) faculty are more willing to adopt new technology if it is easy to use, and management supports their efforts. From 2009-2013, two faculty at CCC refused to adopt Moodle and chose not teach DL courses.

Faculty's resistance to the adoption of technology is one of the principle obstacles to the outlook of DL. Faculty's intention to adopt learning technology is greater if they perceive the technology migration is useful and the technology is easy to use (Huang et al., 2011).

The Technology Acceptance Model (TAM), which was synthesized into the UTAUT and directly correlates with the effort expectancy paradigm, provides a framework that is a widespread examination of the significant factors that affect the instructors' perceived ease of use and perceived usefulness of a new technology and therefore the actual use. When considering the migration from Bb to Moodle at CCC, these factors are related to the instructor, organization, and technology. Instructor factors include self-efficacy, attitude toward an LMS, experience, the style of instruction and personal creativity. Group factors include motivators, technology alignment, team support, technical support, and training. Technology factors include system quality, information quality, and service quality (Al-Busaidi & Al-Shihi, 2010). Each of these factors should be considered during an LMS transition.

Social influence is the third paradigm in UTAUT. Social influence is a direct determinant of intended behavior. It is how much an individual perceives the importance others place on the use the technology. Social influence is a direct determinant of behavior intention specifically compliance, internalization, and identification. It is constructed from subjective norm, social factors, and image. Social influence is a determinant of behavior intentions and is moderated by gender, age, voluntariness, and experience. Social influence is only useful in the beginning stages of employing

technology. As time progresses and users become more familiar with the technology, social influence subsides and becomes insignificant (Venkatesh et al., 2003).

Facilitating conditions is the fourth paradigm in UTAUT. Facilitating conditions is the extent to which a person trusts that infrastructure exists to aid the use of the technology. Facilitating conditions are constructed from perceived behavioral control, facilitating conditions, and compatibility. Facilitating conditions are considered irrelevant in forecasting behavioral intentions when performance expectancy and effort expectancy are in existence (Venkatesh et al., 2003).

With the four paradigms of UTAUT, Venkatesh et al. explained 70% of the variance in technology acceptance behavior, making a substantial enhancement from prior single models which presented only 40% of acceptance (Venkatesh et al., 2003). Irvine and Birch (2009) explored the factors that influence faculty's approval of information and communication technology integration. These researchers examined the effects of UTAUT variables on faculty acceptance. The overarching objective of the research was to inquire about how instructors can be assisted so that they feel at ease integrating technology in their classrooms. The researchers concluded that effort expectancy was the only significant predictor of faculty's intentions in using technology in their classroom. The researchers also stated that it was likely that the primary measure of effort expectancy was the technology skill level of the faculty. Therefore, the researchers concluded that in order for technology utilization to be effective, educators desire to be shown that it is a viable option to use technology and incorporate it into their teachings without complications. The faculty should study the fundamentals of the

technologies that will be the most valuable to them and be presented ways to incorporate the technology into their teachings successfully (Irvine & Birch, 2009). When considering UTAUT in relation to faculty at CCC transitioning to Moodle, user acceptance and behavior can directly impact how faculty view the new LMS along with how they perceive the impact of their workload.

Diffusion of Innovation Theory and Faculty

The diffusion of innovation theory includes faculty participation in relation to their technology use, their attitudes toward technology and DL, and their adoption of innovations. According to this framework, individuals, and even entire organizations adopt innovations at different rates and play different roles in the adoption process. Rogers (2003) identified specific roles in the adoption process which includes innovators, early adopters, laggards, change agents, and opinion leaders. Innovators and early adopters are quick to take on and investigate innovative resources such as high tech tools. However, we also have a majority who accept an innovation much later in the process or who may resist adopting new technology altogether.

According to Rogers (2003), “diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system” (p.5). According to Rogers, when change is being adopted, there are steps in the innovation decision making process that must be experienced. These steps include knowledge, persuasion, decision, implementation, and confirmation. The decision stage is critical because that is where an individual, group, or in this case a faculty member, will choose to adapt or reject an innovation (Rogers, 2003).

Faculty professional development is an essential consideration when enacting any innovation. According to Hall (2013), innovation adoption by the whole will require initial success by users. The ongoing reporting of achievements by faculty will further enhance opportunities to engage and energize the majority. The perceived usefulness, ease of use, and risk minimization are three factors that are necessary for obtaining acceptance by the majority. It should be noted that there are some faculty members who will never adopt new learning technologies or new LMSs no matter the nature of the enticements (Hall, 2013).

Educational Change and Distance Learning

Over the past decade, DL at CCC has changed how courses are offered at the college. For example, more courses are offered online than in the evenings due to student demand. In 2010, the Sloan Consortium completed a study of DL at colleges and universities across the United States. After remaining steady for a number of years, Chief Academic Officers recognized the upward growth of online class enrollments and altered their position by stating that DL is now critical to their long-term strategy. There was a 21% growth rate for DL enrollments compared to a two percent growth rate of overall higher learning enrollments. Seventy-five percent of the institutions reported that the economic downturn increased demand for DL courses and programs, compared to 50% for traditional courses and programs (Allen & Seaman, 2010).

The demand for DL has significantly impacted faculty at the majority of colleges and universities across the nation. Many colleges, like CCC, have been providing DL opportunities for a significant period of time. DL is considered to be “planned learning in

which teaching normally occurs in a different place from learning, requiring communication through technologies as well as special institutional organization” (Moore & Kearsley, 2012, p. 2). CCC’s DL course offerings increased almost 200% from 2005 to 2009. The number of students taking DL courses at CCC increased more than 200% during the same time frame. Over the past decade, student enrollments have grown to exceed the bulk of traditional classroom frameworks, student profiles are evolving, and learners are shopping for educational opportunities that meet their particular needs. Enrollment in DL, where LMSs are utilized, at public two year institutions is approximately twice that of public four year institutions (Allen & Seaman, 2009)

In 2014, 100% of the courses offered at CCC, utilized an LMS. According to Moeller and Reitzes (2011), technology, such as an LMS, by itself will not likely bring about the needed reform in schools. However, it can be an influential tool for educators if it is made part of an inclusive approach to change education. Technology is most likely to be broadly accepted and implemented by educators if it promotes already prevailing practices. In addition, technology is more easily adopted if it aids to solve problems or address challenges. When technology is part of a systems approach or school project and educators have access to sufficient professional development and ongoing assistance technology is more easily adopted as well (Moeller & Reitzes, 2011).

There are many stakeholder interactions to consider when transitioning to a new technology, such as a new LMS. These stakeholder interactions include faculty, the profession, learners, technology, purchaser, and the University (Chaney, Chaney, & Eddy, 2010). Chaney et al. (2010) found that the marginal success or failure that occurs is

due to program planners not viewing the design, implementation, evaluation, and sustainability of DL programs in the framework which the DL will occur. Viewing DL from a contextual perspective forces an inspection of the needs, interest, beliefs, and biases of multiple components in a continuously changing educational environment (Chaney et al., 2010).

Effects of Distance Learning Programs and Courses on Faculty

Trends in online learning indicate that public community colleges, such as CCC, offer more online courses than public four year institutions (Xu & Jaggars, 2011). DL now surpasses evening and weekend courses at CCC. The impact on faculty related to learning a new technology or utilizing a new technology is not uniform. Students and faculty are using LMSs, such as Moodle, more often than other forms of instructional technology. Some faculty have been affected by technology more than others for various reasons. It is rare that faculty use technology such as blogs, games, and simulations (Guidry & BrckaLorenz, 2010). Faculty at CCC rarely utilize these tools in their classes whether they are traditional or DL. There are several impacts on faculty who teach DL or utilize new technologies which include additional stress, additional workload, additional training needs, and need for additional support.

Stress

The impact on faculty related to technology and teaching online can be stressful. According Voakes, Bean and Ogan (2003), most educators believe they are learning new technologies continually. While faculty appreciate the technical support they receive from staff, they also think they need more assistance in learning new technologies.

Administrators seem to have a different perception of faculty stress than the faculty themselves do. Administrators are more prone to think that faculty at their institutions have become less stressed over the past five years. The researchers of the study also determined that when stress is induced by technology or any other source, female professors feel the stress more frequently than their male colleagues (Voakes et al., 2003).

Many college and university administrators have the means to purchase technology while others do not. Many areas in academia have been working with technology tools, especially computers, longer than fields such as the arts and the humanities. For example, there is a consistently high frequency of technology use by both faculty and students in the areas of professional, business, and education disciplines (Guidry & BrckaLorenz, 2010). According to Kolowich (2012), 41% of faculty believed technology made their jobs more stressful. Nearly half of the faculty stated that digital communication made them more productive. Interestingly, faculty were more likely to state that stress was higher, and work hours greater due to digital communications (Kolowich, 2012).

Busch and Johnson (2005) examined the faculty experience with DL development. They discovered that faculty have a stressful experience when trying to alter their thinking process when designing and providing DL teaching unless they have had appropriate training. Most faculty thrive on watching students learn. Therefore, certain considerations should be evaluated before DL courses are developed. For example, (a) faculty should review adult learning theory prior to course development, (b)

faculty should consider their teaching style and necessary changes to instruction, (c) faculty should be trained in the software and LMS, (d) faculty should work with others who have experience with the LMS on how to engage students effectively, (e) faculty should examine all activities to determine what is most useful in a DL environment, (f) faculty should ensure that the DL course is as interactive as possible, (g) faculty should manage their personal time, and (h) faculty should advocate that DL course loads do not exceed 15 students per class (Busch & Johnson, 2005). At CCC, prior to the transition to Moodle, none of these items were considered by stakeholders.

Workload

According to Green, Alejandro and Brown in 2009, faculty are motivated to teach online due to flexible working conditions, opportunities to use technology and share knowledge, and for career advancement. However, they also believed that the time commitment to teaching online may discourage them from doing so. They also stated there was a lack of financial compensation for teaching online related to the increased workload (Green et al., 2009). During the transition to Moodle, CCC did not financially compensate the faculty.

According to Seaman in 2009, 64% of faculty believed that it takes at least somewhat or a lot more effort to teach online when compared to traditional instruction. In addition, 85% of faculty who had developed an online course believed that it takes somewhat or a lot more effort. Faculty in this same study stated that the additional effort to develop and teach online was the greatest barrier to involving faculty in DL (Seaman, 2009). When faculty are providing DL options for students using an LMS, the format of

materials and how the actual communication occurs are different from the conventional classroom teaching environment (Chen, 2013).

Faculty have varying opinions about the impact to them when teaching online. Faculty opinions are even more segregated when examined according to the type of institution where a faculty member works. For example, faculty across all settings indicated that the greater time commitment was a challenge. Only 44% of private college faculty believed there was a greater time commitment. This time commitment was less than what the community college and public faculty believed. In addition, faculty also worried about losing interaction with students while teaching online (Windes & Lesht, 2014).

Training Needs

Wong and Huang (2011) examined the effects of LMS quality and user acceptance on organizational learning. They determined that the more users are content with DL; the more organizational learning will be improved. Wong and Huang, also concluded that employees will be more attentive in using DL if the system can offer them useful information and is highly functional. Both of these factors may increase employee satisfaction. In order to improve the use of the LMS, it is vital that DL training needs be aligned with the daily operations of employees. In addition, an intuitive user interface should be provided to make it easy for the faculty to use DL technology for learning. The researchers concluded that an LMS's quality has a positive effect on the acceptance and use of elearning technology. The LMS's quality also has a positive effect on organizational learning effectiveness. The acceptance and use of an LMS plays a full

mediating role in the relationship between the LMS's quality and the organizational learning effectiveness. Therefore, when implementing DL, college administrators should manage both the LMS and the quality of the elearning (Wong & Huang, 2011).

Zhang and Xu (2011) suggested that when faculty can compare the replacement technology being provided with the legacy technology, the learning curve is lowered. Knowledge is extended to the new tool by pointing out the explicit similarities to the faculty member. It is also important to highlight the differences and improvements offered by the new technology tool or LMS. Focusing on the new can help users understand the benefits of replacing a legacy system or technology and ease their user resistance. The researchers also suggested that when replacement technologies are being chosen, to look for technologies that are compatible with what they are currently using. Compatible technologies will encourage adoption among stakeholders (Zhang & Xu, 2011).

Chang, Shen, and Zhi-Feng Liu (2014) found that training was a significant issue for instructors who have and have not delivered courses via DL. Instructors who taught online with sufficient training scored their instructional practices higher than those with little or no training. Thus, it is important to note that repetitive training programs such as basic computer skills are not adequate for the professional development of DL instructors. In addition, facilitating student's participation is what faculty identified as their greatest training need when instructing DL courses. Therefore, training in course design should be incorporated into faculty development programs related to DL. Training

will promote teacher empowerment in addition to practical administrative and technology support (Chang et al., 2014).

Faculty Support

Faculty who have the least amount of experience with DL perceive the barriers to teaching online as greater than those who had the most experience (Lloyd, Byrne, & McCoy, 2012). Faculty who are in an older age group, ages 45 to 60 years, expressed that institutional barriers were larger than their younger colleagues. Faculty also believed that increased workload, increased time requirements, lack of time for student grading and feedback, and insufficient compensation for teaching were all related to faculty rank. As faculty status increased, the perception of cost, and benefit barriers also increased (Lloyd et al., 2012).

According to Chaney et al. (2010), administrators who are planning new DL programs should be allocated enough resources for technology and training. The culture of the institution is influenced by policies and procedures that have been enacted over time. Therefore, the culture and norms tend to support the traditional delivery method versus online delivery. Success or failure of DL programs and their growth rates can be negatively impacted as well as student success if not supported properly. Some examples of activities that are provided in a supportive academic culture are: online application processes, online payment, student fees that are not accessible via a distance are waived, disability services are provided online, and there is a virtual campus (Chaney et al., 2010).

Ryan, Toye, Charron and Park (2012) suggested that when going through a technology transition, the following should be available to faculty in order to reduce adverse impacts: (a) individual tutorial sessions that are interactive for faculty, (b) involve the instructors so that their suggestions can be implemented, (c) provide more support, more training, and more student training throughout the entire transition, (d) ensure the technology is reliable throughout the transition, (e) test pilots should occur in advance of the transition, (f) ensure that instructors are asked for input concerning what is needed and include comparisons from the new version to the old version, and (g) provide easy access to technology and instructional support (Ryan et al., 2012). During the technology transition to Moodle at CCC, only a few tutorial sessions were available for faculty.

According to Mills, Yanes, and Casebeer (2009) faculty support was identified in the success of educational technology programs. In addition, faculty had little knowledge of the existing support for DL that was available on their campus. The faculty believed that there was little administrative support for DL. They also believed that increased class preparation time, extended office hours, and the acquisition of new technological skills was needed to develop online courses. In addition, faculty felt a personal lack of technology competence. The researchers suggested that the college administration assure faculty that there is support available to them. Administration should also communicate that distance education is a viable means of teaching and learning (Mills et al., 2009). Infrastructure support is also essential for DL faculty. Faculty support should be well

organized with an ongoing process of improvement. Feedback should be gathered from the faculty before and after the support occurs (Meyer & Barefield, 2010).

Lack of Financial Support

DL courses can be a burden on many faculty, especially those who are not comfortable with technology. According to Windes and Lesht (2014), 90% of faculty who had not taught online believed that instructional design assistance was critical for their success. Seventy-five percent of faculty who had taught online thought it was necessary as well. Eighty-one percent of faculty who had not instructed online also expressed that course release time was essential, while 65% of faculty who had taught online felt this way. Twenty-five percent of faculty at public institutions were more likely to be paid additional monies to teach online than those at community colleges or private colleges (Windes & Lesht, 2014).

Windes and Lesht (2014) also asked faculty who had not taught online what factors would motivate them to teach online. All faculty groups answered they would do so if they could ensure that quality is not compromised, if it would meet students' needs, and because it would allow for more flexible schedules. In addition, the bulk of four year private and public school faculty (60%) stated that getting an increase in pay or a stipend was critical.

According to Singleton and Session (2012), there is a need for future research relating to faculty compensation associated with nontraditional instruction. In some institutions, compensation for creating a nontraditional course is more than teaching a traditional doctoral course. Higher compensation for creating a nontraditional course is a

thought provoking discovery because, as the literature proposes; it is significantly more time consuming to produce a nontraditional course than a traditional course.

Additionally, the researchers suggested that faculty teaching in non-traditional environments like DL should adjust their perception of the teaching and learning process. Faculty should also become accustomed to the technology mediated pedagogy of the new teaching atmosphere. Although the greatest attention was paid to instructional subject matter, findings specified that DL courses require more time and demand a minimum of 20% more time to develop than a traditional course. Because there is an increased need for teacher to student interaction, DL educators must adapt to being accessible to students by learning to interact in new ways (Singleton & Session, 2012). Huang, Deggs, Jabor, and Machtmes (2011) suggested that each faculty member should:

Be offered relevant rewards and timely supports to ensure the teachers' proficiency of online technology, adequacy of online instructional design, delivery strategies, and evaluation. More importantly, it is necessary that the distance learning vision, goal, and policy should be acceptable, clear, and understandable to everyone in the institution and organization, mainly because the vision, goal, and policy could be considered key components that drive for distance learning success. That is, the DL vision, goal, and policy that is acceptable and clear to everyone could be the key forces to foster more positive organizational climate and culture toward the implementation of DL (Implications section, para. 3).

The researchers in this study also suggested that the faculty workload and burnout issues should be considered. Faculty workload and burnout have importance to the sound development of DL, mainly because those issues were highly connected with the DL quality. DL instructors should be provided with adequate teaching assistants. In addition, the appropriateness of online class size should be considered in order to avoid this heavy workload and burnout (Huang et al., 2011).

Many of the faculty at CCC have some experience with technology and DL. However, it is important that the faculty does not let technology dictate how the course will be designed. The integrity of the course content, specifically course outcomes, should be the most important factor when developing DL courses. Some faculty also perceive that the use of advanced technology could intimidate and eliminate students not just faculty (Schulte, 2010).

When a college's administration is developing an elearning strategy, it is vital for the administration to have a clear vision of expected outcomes, an understanding of attitudes of faculty related to the strategy and a developed set of steps to follow in order to obtain the desired outcome. When planning the next steps, they should include adopting a series of actions designed to enhance DL capacity through awareness and training along with adopting mandatory credits of DL in all programs. Many times there is a widespread lack of awareness of the potential and quality which elearning can achieve or the type of pedagogical philosophy underpinning effective elearning (MacKeogh & Fox, 2009).

Learning Management System Feasibility Study

The North Carolina Community College System (NCCCS) published a study called the Open Source Collaborative: Moodle Assessment Report. The study concluded that Moodle was a viable alternative to Bb. Moodle is considered the most cost effective solution related to licensing, hosting and cost per DL student. Moodle does not require licensing fees. Also, vendor hosting for Moodle is considerably less. For example, CCC paid \$56,000 in 2011-2012 for Bb fees and vendor hosting. In that same year, CCC paid \$11,000 for Moodle hosting, which also included a Kaltura video server not available with Bb. The results of NCCCS study were that there was a 72% cost decrease when a college migrated entirely to the Moodle LMS (Randall, Sweetin, & Steinbeiser, 2010). The results of this study prompted many of the 58 state supported community colleges in North Carolina to examine transitioning to Moodle from Bb. Prior to this study, CCC determined that migrating to Moodle was the best course of action for the college.

There are numerous options for LMSs available. In 2011, Pearson Publishing and Google announced that they were going to provide a free system, OpenClass, for schools that could serve as an LMS . OpenClass is being utilized in a variety of classrooms such as Psychology, Art, and English. OpenClass can be used in a variety of different course environments. It has a Facebook similarity to the interface and can be used in *face-to-face* classes as well (Fischman, 2011). Face-to-face refers to students who attend classes in a traditional classroom setting. CCC utilizes its LMS in traditional, hybrid, and online course environments. In spring of 2014, all courses at CCC were given a web presence via Moodle.

According to Carvalho, Nelson, and Silva (2011) students seem to value the impact of an LMS to their learning. Students also appear to view an LMS as a useful tool rather than a substitute for classroom activities (Carvalho et al., 2011). Although there are studies related to the effectiveness of Moodle and other LMSs, few researchers have considered the turmoil, distress, and modifications required when a LMS is modernized. When transitioning to a new LMS, faculty and stakeholders may be problem solving due to the unfamiliarity of the new LMS and the changes required. (Ryan et al., 2012). In addition, if LMSs are going to be utilized for higher levels of engagement, faculty must be supported and encouraged to use the tools available in the best possible way (Carvalho et al., 2011). During this study, I aimed to address some of this gap in the research related to support for faculty.

When implementing new technology, primarily related to an LMS, it is essential that the LMS staff be perceived as valuable and credible. Lawler (2011), determined this would be more relevant to a recent implementation than adhering to a traditional project management structure. The staff were more focused on the needs of the users rather than the technical issues of the implementation. The personnel ensured that the users had the necessary training and had a very high level of local ownership with the implementation. The staff and users believed they were empowered and knew their actions were going to affect the teaching and learning of the university (Lawler, 2011).

Effects of Learning Management System Utilization on Faculty

Faculty have reasonable concerns about the time and effort needed to make an LMS transition effective for their courses and students (Smart & Meyer, 2005). Tips can

be gained from talking with other colleges who have migrated to a new LMS. According to Smart and Meyer, there are many items to consider when migrating to a new LMS:

- Time and effort should be considered when colleges seek to save money by consolidating or migrating to one LMS. Faculty will need to review, correct, and revise content once the course has been converted. In many cases, courses must be completely recreated. Therefore, there is a real cost to the faculty member, department, and college.
- Colleges need to investigate and evaluate the conversion tools of potential LMS products.
- LMS providers need to improve and market their ability to convert material from one LMS to their product since this could well be an important selling point for institutions already invested in a particular product.
- Despite the work of fixing partially converted courses, faculty are not opposed to trying a new LMS or LMS tool, and they feel students will be willing to change too (Smart & Meyer, 2005).

These items were not addressed during the migration to Moodle at CCC. According to Moore and Kearsley (2012), there are four main causes of dissatisfaction and resistance to DL: confusing course design, instructor incompetence, student expectations are not realistic, and technology issues.

Many college faculty at institutions across the nation utilize an LMS to store, manage, and share its academic assets and knowledge. An LMS can be used in many different delivery options. The success of an LMS in any college begins with faculty

acceptance, which in turns begins the learners' utilization of an LMS. According to Al-Busaidi and Al-Shihi (2010), factors that relate to usage of the LMS are associated with the instructor, organization, and technology. Instructor factors comprise self-efficacy, attitude toward LMS, experience, teaching style, and personal creativity. The collegial organization factors include motivators, technology alignment, organization support, technical support, and training. Technology factors include system quality, information quality, and service quality (Al-Busaidi & Al-Shihi, 2010).

In addition, Al-Busaidi and Al-Shihi (2010) also stated that faculty use of an LMS was determined by information quality, system quality, computer anxiety, and technology experience. The researchers also suggested that students' usage was determined by several different standards, such as system quality, technology experience, and computer anxiety. The researchers were unable to detect the significance of the self-efficacy and service quality on the LMS usage. The researchers implied through the findings in this study that service quality was not a critical factor in the existence of a good quality LMS and experienced technology users. Instructors should ensure in their course design that the use of elearning tools is relevant to the students' studying tasks. LMS developers should ensure that the system has good quality characteristics to promote its marketability among academic and training institutions. The acceptance of an LMS by the institution begins with the faculty adoption, but it persists in the learners' acceptance and their continuous use (Al-Busaidi & Al-Shihi, 2010).

LMSs may be utilized in a variety of formats, even in face-to-face formats. According to Goyal and Purohit (2010), faculty believed that one of the benefits Moodle

provided was that it saved time and allowed for easier management of course materials. Faculty expressed that Moodle was a useful tool for conducting tests. However, the faculty also stated that they used Moodle because it was a requirement by the department or course; it also should be noted that faculty used it because they were comfortable with technology. Overall, faculty believed that the effect of Moodle on the classroom was beneficial to student learning (Goyal & Purohit, 2010). When administrators are planning to migrate to a new LMS, the software should be customized to suit the needs of the faculty and students and additional features should be added. Administrators should make use of the LMS mandatory for all faculty on a regular basis to increase its acceptance by the faculty (Goyal & Purohit, 2010).

In 2011, Zuvic-Butorac, Nebic, Nemcanin, Mikac, and Lucin completed a study and evaluated faculty's beliefs related to an LMS and DL. The majority of faculty in that study, 92%, believed that an LMS helped them in the organization of course material, management of course delivery, and the course administration. Acceptance of blended elearning among students was estimated as high as 96%, and the reported non-acceptance came exclusively from the social sciences and humanities. Students' participation in elearning that was required by faculty was 83%, with significantly higher percentage of positive answers (100%) coming from the IT category of course subjects. The researchers also concluded that very often stakeholders expressed frustration due to unequal teachers' practice because some teachers invested in building blended elearning courses, while others did not even communicate with students by email. Faculty also pointed out difficulties they experienced with different levels of technology skills and literacy among

students, specifically in the student population in humanities and social sciences. Very often faculty also found the new technology situation more demanding. The new technology was additional work during the preparation of materials and activities, and also during the course. In addition, the communication requirements, such as providing feedback to students, took too much of their time (Zuvic-Butorac et al., 2011).

Turner (2011) found that the faculty believed that the training, time, and resources needed to transition from one technology to another was substantial. Additionally, Green, Alejandro, and Brown (2009) found that faculty who were already experienced online were highly driven by motivations such as:

Flexible working conditions and the opportunity to use technology. They are also motivated by intrinsic rewards, such as the opportunity to share knowledge with others, the intellectual challenge, their career development/advancement, and the opportunity to gain teaching experience. The major factor that might discourage them from teaching DL courses is their concern about time commitment. Based on these factors, some possible retention strategies may include the provision of continuous training, of mentoring from veteran distance learning instructors, and of opportunities to assist with course/program development. Because most faculty members are motivated by flexible working conditions, they should be allowed to have some say about their course load and schedule. (Summary section, para. 1)

It is also suggested that institutional support increases levels of motivation and dedication among faculty (Meyer, 2012).

Faculty and Change

Mills, Yanes, and Casebeer (2009) found that the faculty may fear integrating technology in a professional way into coursework. This may indicate a lack of confidence in their knowledge and ability to utilize technology. The researchers also stated the discomfort with the idea of students knowing more about uses of technology than they do. Fear may also play a part in how faculty at CCC perceived the impact to them during the LMS migration (Mills et al., 2009).

Windes and Lesht (2014) also concluded that community college faculty who have taught online were less favorable toward online education than faculty from other institutional settings, such as public and private universities. The researchers also found that community college faculty had become more cynical regarding teaching online in the past five years than other faculty groups. The researchers suggested that if administrators want to encourage faculty to teach online, they should provide consistent messages via strategic planning, provide incentives via promotion and tenure, and provide course related support in the form of instructional design and additional monies (Windes & Lesht, 2014).

Summary and Conclusions

Through this literature review, I examined the UTAUT and diffusion of innovation theory as it related to DL. In addition, the impacts to faculty who teach or develop DL courses were examined. Unfortunately, how faculty are impacted when transitioning a new LMS, Moodle, is unknown. Moodle is designed differently and based on the constructivist learning theory which is different than Bb (Moodle, 2012). Faculty

must learn how to present and teach the information differently than in Bb. The support, time, and training needs of faculty during this type of technology change were not known and were not available in the literature.

A phenomenological methodology was selected based on the literature review cases. This method allowed for the collection and analysis of data on faculty and impacts to them during a technology transition. Technology acceptance may directly affect how a faculty member considers the effects of the LMS transition to their workload. How quickly they adopt the technology may also change their perception of how they are affected by the transition. Other factors I examined in this chapter include training for DL, student, and instructor interaction in DL, and intrinsic rewards with DL which may also contribute to the impact a faculty member faces when transitioning to a new LMS.

This study fills a gap in the literature on the impacts to faculty during a transition to a new LMS. The impacts to faculty teaching DL courses and utilizing an LMS is available in literature. However, research is not available on the impacts to faculty when they must teach DL and transition to a new LMS such as Moodle. In order to determine the impacts to faculty during an LMS transition, a qualitative phenomenological study was designed and is explained in Chapter 3.

Chapter 3: Research Method

The purpose of this phenomenological study was to identify how faculty were impacted when migrating to a new LMS. This chapter includes the processes and approaches that were chosen for this study. The central research question focused on how faculty were impacted during an LMS transition. This chapter also includes information on the research design and rationale, methodology, role of the researcher, setting, trustworthiness, and a summary.

Research Design and Rationale

This study was guided by the central research question: How did the transition from Bb to Moodle impact the faculty member's workload, attitudes, and instructional practices at CCC from 2009-2013. Leedy and Ormond (2014) stated that qualitative methodology includes a variety of approaches that focus on a phenomenon known to occur in what is called a *natural setting*. This study occurred in the natural setting of the college where phenomenon happened. Merriam (2014) stated that qualitative research is a "powerful tool for learning more about the lives and sociohistorical context in which we live" (p.xv). Qualitative research seeks to answer research questions, collect evidence, and produce findings (Merriam, 2014). I considered other research approaches, but determined that they were not suited for this study. The five standard research designs in qualitative research are case study, ethnography, phenomenological study, grounded theory study, and content analysis (Leedy & Ormrod, 2014).

Other types of qualitative research were considered not as suitable due to their emphasis or methods used: ethnography is concentrated on the study of social groups and

culture. Ethnographies typically have fieldwork that is conducted over a prolonged period of time. Grounded theory concentrates on building practical theory that was founded on the data collected. Narrative research articulates a story that concentrates on a crucial event or biographical script and are often depicted as chronologies. Case study research is centered on an element of inquiry rather than the subject of examination and is often defined as a bounded system (Merriam, 2009; Yin, 2009).

A phenomenological research design was utilized in an effort to identify and examine the impacts to faculty who transition to a new LMS, Moodle. A phenomenological approach was chosen because it can be utilized to examine perspectives and gain insight into situations or circumstances of faculty regarding their perceptions during an LMS transition (Leedy & Ormond, 2014). In this study, I attempted to gain a comprehensive understanding of the impacts to faculty during an LMS transition, with the goal of identifying the elements needed for it to be successful. This phenomenological study focused on the interview as the data collection tool (Moustakas, 1994). As the researcher, I examined large amounts of information, utilized Nvivo 10 to identify themes and categorize the data, then summarized the information to support the conclusions and recommendations.

Qualitative research methods enabled me to do the following: conduct an investigation where other methods are either not realistic or not ethically reasonable; research conditions where little was known about what is going on; explore the intricacies that are beyond the scope of more controlled quantitative approaches; closely examine the college faculty to find out what really happened during the LMS transition;

view the situation from the inside out and to see it from the viewpoint of those involved; and carry out research related to the processes leading to results rather than into the significance of the results themselves (Gillham, 2010). The purpose of qualitative research is to expose the intricacies of an examined occurrence or experience to gain a better understanding. (Leedy & Ormrod, 2014). This study revealed what the impacts of the LMS transition were to faculty at CCC. Although qualitative research typically involves discussion and words, this does not mean that it is barren of measurement or that it cannot be used to explain certain social experiences.

Role of the Researcher

As the researcher of this study, I have 18 years of educational experience. Ten years I was involved in DL as a technology leader and teacher and 8 years as a college vice president, dean and department chair. I have worked closely with faculty and served as a faculty member at various colleges; therefore, I am familiar with the culture, leadership and day to day functions of faculty. Consequently, there is the potential for researcher bias. My ontological view regarding the problem statement is that extensive amounts of time and effort are required by faculty when transitioning from Bb to Moodle. I have also utilized various types of online learning tools with students, such as the virtual world of Second Life. I believe that a faculty member must learn a new LMS along with learning how to provide instruction in a new way. In my experience, when a faculty member decides to utilize a new form of technology, significant time and effort is required. The faculty member may need to rethink how to provide learning a topic through a new LMS. The purpose of this qualitative phenomenological study was to

explore the impacts to faculty who teach DL and must migrate from the LMS Bb to Moodle. These implications can aid administrators and instructional designers in providing a more positive LMS transition for faculty in the future.

Throughout the phenomenological study, I sought meaning from the data shared, to ask follow up questions and to explore additional research and information related to the study. I have had interactions with some of the faculty in this study. As a Vice President of Administrative Services at CCC, I serve as one of the two senior leaders at the college. However, I do not supervise any of the faculty that were interviewed as part of this phenomenological study in order to eliminate any influence of the results. I resisted any temptation to solve problems of the interviewees as this would have had a biasing effect on them (Merriam, 2014). I remained impartial, asking only the questions recorded on the interview sheet or direct follow up questions. By following a defined set of processes and procedures, I was able to avoid bias. Furthermore, the external auditor assessed the findings, interpretations and conclusions to ensure they were supported by the data. Due to my experiences with other leaders at the college, I had a desire to complete this study. Many leaders at CCC who have worked with me do not understand technology migration and have never worked with DL. However, these leaders have a realm of responsibility that includes DL programs and courses. I made every effort to set all personal feeling and views aside for the trustworthiness of this phenomenological study and tried not to include preconceived opinions. The coding, member checking and external auditor review provided the triangulation of data and confirmed the

transcriptions as well as my interpretations and conclusions in this phenomenological study.

Methodology

A qualitative phenomenological research design was the chosen research methodology for this dissertation. The context of the study was the setting of CCC and the working environment of the faculty who transitioned courses from 2009-2013. Groenewald (2004) suggested that my objective should be to give an accurate account of the phenomenon based on the true facts provided by the faculty during the interviews. I interviewed and audio recorded 13 faculty at CCC who transitioned courses from Bb to Moodle from 2009-2013. I transcribed those interviews and then had the faculty member check them. An external auditor also reviewed and confirmed the findings and themes of the research.

Participant Selection Logic

The general population of the study was the current full time faculty from CCC, who transitioned courses from Bb to Moodle between August 2009 and December of 2013. I chose CCC for this research because it was one of the first colleges in the southeast to transition from Bb to Moodle. A researcher should determine the unit of analysis before sampling. A unit of analysis explains who or what is being examined (Singleton & Straits, 2009). I used purposeful sampling to interview 13 of the 72 full time faculty members at the college. Purposeful sampling means that the researcher selects participants and sites for the study based his expert judgment that is typical of the population (Singleton & Straits, 2009).

Current full time faculty who had transitioned a course from Bb to Moodle from 2009-2013 were contacted via email and asked to participate in the study. According to Singleton and Straits (2009), it may be difficult to obtain a list of the entire group for sampling purposes. However, I collected a current list of faculty employed who transitioned courses that is available for review. There was representation from each of the three academic areas at the college to learn what challenges faculty experienced and suggest improved methods of LMS migration.

Initially, I contacted faculty via email to determine if they were willing to participate (Appendix B). I also sent an email reminder to prompt for additional faculty participants (Appendix C). Then I scheduled the interviews. These interviews, consisting of faculty with different experiences, resulted in an extensive study of the impact and challenges faced by faculty before, during, and after their transition to Moodle and course delivery. This sample included experienced and inexperienced DL faculty. Experienced faculty, for this study, meant the faculty member had taught DL courses for CCC for at least three years. The viewpoint of inexperienced faculty was critical to get an accurate depiction of the case. Inexperienced faculty, for this study, meant faculty who had not delivered DL courses for a minimum of at least two years. Formal written permission to interview faculty was obtained through the President of CCC when the proposal was approved.

Polkinghorne (1989) stated that sample size fluctuated significantly for phenomenological based studies, referencing studies with as few as three participants and as many as 325. As I compared the data collected from one interview to the next, I

discovered similarities and differences (Levasseur, 2011). I realized that the point of data saturation was reached with 13 faculty interviews in the full study due to the similarities obtained.

Instrumentation

When determining what type of interview, a researcher can consider telephone, focus group, or individual interviews. I utilized individual in-person interviews in this study, questioning 13 faculty members. In preparation for the individual interviewing sessions, an interview guide was prepared (see Appendix A). The interview guide contained the interview questions. The interview questions were open ended in an effort to encourage faculty participants to give full responses. The predetermined set of questions ensured that key topics would be discussed and that each interview was treated in exactly the same fashion (Appendix A). During the interviewing process, I ensured that the interviewing protocol was followed and that the questions were asked in an unbiased manner. Interviewing is targeted and insightful and provides explanations as well as personal views or attitudes. However, there can be response bias, inaccuracies due to poor recall, bias due to poorly created questions and reflexivity. (Yin, 2009).

Pilot Study

According to Yin (2009), the pilot study will support the researcher in enhancing the data collection strategies with reference to both the substance of the data and the procedures. A pilot study will aid the researcher in determining whether the research structure is appropriate for the planned study. This pilot study included interviews of four faculty members, who were not participants in my full study and who transitioned course

materials from Bb to Moodle during 2009-2013. This pilot study mimicked the same plans as the actual study. With the pilot study, I obtained IRB approval in advance and used NVivo 10 software to examine the data as well.

After completing the pilot study, I was able to reflect and revise the research approach as needed. A pilot study allowed me to refine the data collection plans and develop an appropriate and applicable line of questioning. A pilot study is a small experiment designed to gather information and test the structure of the study prior to a larger study. The process of completing a pilot study will improve the full study's quality and efficiency. The purpose of a pilot study is to reveal deficiencies in the design of a proposed procedure or, in this case, an interview. By completing a pilot study, I was able to address deficiencies before resources were expended on the full study. I was also able to examine five factors prior to the main study. The four factors examined included: ensuring that the instructions given to participants were understandable, ensuring the interview questions were understandable, ensuring equipment was operating correctly, and examining the reliability and validity of results (Altman et al., 2006).

Procedures for Recruitment, Participation, and Data Collection

I interviewed 13 faculty at CCC during a two-week period. For each faculty participant, I scheduled an in-person interview at a mutually agreed upon time. Interviews lasted between 30 to 90 minutes each. I reserved the Human Resource Department's interviewing room so that the individual interviews occurred in a quiet location at CCC. Faculty frequented this space, and the area offered comfortable seating and refreshments. Each of the interviews were recorded utilizing Audacity software. I utilized a predesigned

form to record information collected during the interviewing process. This protocol allowed me to take notes during the interview and organize thoughts and responses given by interviewees. I then manually transcribed each of the interviews with Microsoft Word 2013 software. Once transcribed, each interview was sent to the faculty participant as a password protected file, for member checking. Once faculty responded that they agreed with the transcribed document, I began analysis. Once the faculty participant gave approval for their transcribed interview, the participant was done with the study. There were no requirements for follow up with the faculty participants after member checking had occurred.

Data Analysis Plan

Qualitative research helps us to understand the social world in which we live and why things are the way they are (Hancock, Ockleford, & Windridge, 2009). Qualitative research is concerned with meaning in a context. It involves the interpretation and analysis of data. The role of the qualitative researcher requires an active engagement with the data. Qualitative research acknowledges a personal element in the research process (Willig, 2012). Analyzing phenomenological data has the same hurdles as any other qualitative research. In qualitative research, the objective of data collection is to create a comprehensive record of participants' words and actions to ensure as little as possible is lost in translation. As a result, qualitative data tend to be voluminous and hard to manage (Willig, 2012).

Coding was a substantial phase during analysis. Coding provided me a way to organize and make sense of the textual data. It should be noted that coding and analysis

are not the same. Qualitative analysis continues throughout the life of the study. As the researcher, I thought about how to make sense of the data and what codes, categories or themes should be used to explain the results. The analysis of qualitative data is laborious and not a singular phase. Although the research involves a smaller sample, extensive time for analysis was needed (Basis, 2003). I utilized NVivo10 to search for thematic trends. NVivo 10 is a software tool that supports qualitative analysis by housing response data and documentation of research analysis, in addition to supporting the process of thematic analysis.

During initial coding, I imported the transcribed Microsoft Word files into NVivo 10. I reviewed the transcripts line by line which was very detailed and time consuming. However, during this phase of coding initial interpretations were made and I made descriptive comments. This process is used to build a foundation for subsequent coding cycles. Then pattern coding was used to organize similarly coded information (Saladana, 2009). At this point, themes began to emerge from the analysis.

Utilizing NVivo 10, I was able to code, categorize and complete thematic analysis on the data collected. Coding focused on the classification of response data into terms and phrases that represented ideas, patterns, and relationships between concepts. Once the data was classified, codes were reassembled into categories based on similarities. NVivo10 served as a valuable tool for analysis of the interview data. NVivo10 supported nodes and sub nodes to organize raw data into categories and codes, the allocation of fragment of text to a node (Bazeley & Jackson, 2013).

Once the coding was completed, and themes were established, I sent a letter of consent to a seasoned staff member who did not participate in the study. This staff member had at least five years of educational experience at the college and had worked in both Bb and Moodle. This staff member had served the college as an internal auditor. This staff member acted as an external auditor for this study and independently assessed the findings, interpretations and conclusions of the study to see if they were supported by the data. The staff member agreed with the findings of the study.

Issues of Trustworthiness

This study went through a very rigorous process of approval that included the Walden University IRB committee. This process ensured that the research has met the University's standards of quality, ethics, and methodology. In addition, an external auditor was used to confirm the results found. This study received IRB approval IRB #07-05-13-0117555.

Credibility

The credibility of the research is also confirmed by choosing faculty participants that have experience with DL and both LMSs discussed. Credibility, also known as internal validity, involves ensuring that the results of the qualitative research is credible and believable (Neuman, 2009). All faculty participants are familiar with current DL practices at CCC and are currently teaching. In addition, participation in this study was voluntary. All questions focused on the transition and the impact it had to each as a faculty member. I also ensured that my portrayal of the interviews was confirmed by each faculty member interviewed through member checking. Each faculty participant was

asked to review the transcription of their interview and provide any corrections or additional information they determined was necessary. Member checking is a technique used by researchers to ensure that the information obtained from the participants is correct (Marshall & Rossman, 2011).

Transferability

The workload and DL practices at CCC are a similar representation of approaches taken at other community colleges. These characteristics make CCC an ideal place to conduct this study. The results are transferable in the sense that they can remain applicable and relevant even in other organizations. Transferability is how study's findings will be useful to others in similar situations with similar research questions and questions of practice (Marshall & Rossman, 2011). However, this study was only completed at one community college. Transferability involves providing detailed information on the context and background as the impetus for the study, and this criterion was met (Lodico, Spaulding, & Voegtler, 2010).

I ensured that the in-person interviews were similar for all faculty participants. I also made sure that the interview procedure was followed and that the conversation remained focused on the topics provided in the interview questions. All follow up questions centered on these topics as well. Participants were free to participate or not participate in the research without prejudice. Faculty were protected from physical harm and psychological harm (which includes loss of dignity, autonomy, and self-esteem). This study was about the beliefs faculty had about the impacts to their workload and not a study of the types of individuals in the study.

Dependability

Dependability was ensured in this study by providing a detailed description of the data collection and analysis procedures. Dependability is showing ways in which I, the researcher,

Plan to account for changing conditions in the phenomenon chosen for study and changes in the design created by an increasingly refined understanding of the setting. This represents a set of assumptions very different from those shaping the concept of reliability. (Marshall & Rossman, 2011).

In addition, audio recordings were utilized and transcribed. Those transcriptions were member checked by the faculty who participated in the study. The same structured interview process was conducted with each of the faculty.

Confirmability

Finally, confirmability is “whether the findings of the study could be confirmed by another person or another study...And show that the logical inferences and interpretations of the researcher can make sense to someone else” (Marshall & Rossman, 2011). I utilized an external auditor to review the data and the findings, as well as, review the final dissertation. In addition, all transcripts were member checked by the faculty participants. My desire was to represent the beliefs of faculty who are impacted during an LMS transition. I believe I have accomplished the purpose of the study. I am hopeful that this study will eventually inform policy in terms of the crafting manageable workloads and administrative support for faculty when transitioning to a new LMS.

Ethical Procedures

Interviews, conducted in-person, were the principal source of data collection for this study. Interviews with members of the study lasted between 30 and 90 minutes. Following the recommendation of Trochim (2006), I did not coerce any individual into being part of this case study. Instead, I asked all participants to sign a consent form stating their willingness to be involved in the study. I utilized a recording device to capture all discussion during the interviews that were held at the college. The interviews were transcribed from these recordings. Once transcribed, I used NVivo 10 software to code the interviews. I reported all data, not simply data that supported a particular outcome. After the interviews had been transcribed, member checking occurred to insure validity by allowing the participants to review the transcriptions and notes taken during the interview and provide corrections as needed.

As the researcher, this study aided me in learning specific details of the process of migrating to the new LMS Moodle. I also gained insight into the process of migrating to Moodle which included course transition, and what successful strategies faculty used to overcome any challenges associated with the transition. This study also aided me in learning what faculty believed would have helped them to succeed during the process. The current study included the perspectives of both experienced and inexperienced faculty. I recognized and discussed the ethical concerns of data collection and storage with the faculty. Faculty remained nameless throughout the phenomenological study process. I protected each file electronically with the use of passwords and secure hardware and deleted faculty names from all materials. I stored, via the web, all

transcribed files, and audio files. Each file was password protected, as well as, the web storage account. I also maintained a backup copy stored in a personal safe as a precaution against the main computer failure. The backup copy was also password protected, and the safe was kept secure with a key that only I had. The safe will continue to store the material for at least five years, after which I will destroy the data.

Walden University's Institutional Review Board (IRB) approved this study to ensure that the research complied with the university's ethical standards as well as U.S. federal regulations. IRB approval was required before collection of any data, including pilot data (Office of Research Integrity and Compliance, 2012). Before any interviews, each participant read and signed a consent form (Appendix D).

Summary

The purpose of Chapter 3 was to review the relevance of the qualitative method chosen for this study. The rationale for phenomenological study research was also explained. Detailed explanations of the population sample, data collection, and analysis, and the role of the researcher were also provided. For phenomenological study research, data collection, and analysis can occur at the same time. The interviews that occurred provided the data for analysis and built the final phenomenological study results. Also, an explanation of data security, integrity and protection of human rights was covered. The purpose of Chapter 4 is to review the results and limitations of the study, and the purpose of Chapter 5 is to share the findings and recommendations for action.

Chapter 4: Results

The purpose of this phenomenological study was to determine how faculty workloads were impacted during a LMS transition. This chapter contains an overview of the pilot study and the results obtained from the full study. This qualitative research methodology involved the use of an in depth in-person interview with each faculty participant. This research design allowed me to take comprehensive explanations of faculty experiences and challenges and synthesize them into common themes that explained the experiences of the faculty in their college setting. Moustakas (1994) shared that general or widespread meanings are provided from individuals who have lived the experiences and can give their own personal descriptions of their experiences. This phenomenological study provided a thorough analysis of the beliefs of faculty who transitioned a course from Bb to Moodle.

In this chapter I presented the analysis and the answers to the research question guiding this phenomenological study. This chapter includes a detailed account of the analysis and description of the practices used in this study. The chapter will be organized into the following sections:

- Pilot Study
- Research Setting
- Demographics
- Data Collection and Analysis
- Evidence of Trustworthiness
- Research Questions and Findings

- Summary of Findings

Pilot Study

The purpose of a pilot study is to “help you to refine your data collection plans with respect to both the content of the data and the procedures to be followed” (Yin, 2009, p.96). In addition, the pilot study also helps the researcher to develop appropriate questions (Yin, 2009). This pilot study aided me in determining whether the research structure was suitable for the planned study. The participants were satisfied with the interview protocol that I had developed through an iterative and consultative process. However, an additional question was added to the interviews (Appendix A). The faculty participants suggested that the final question ask faculty to share what support is needed during the LMS transition.

The pilot study was necessary to help me determine whether or not the instructions and the questions were clear and understandable prior to the full study interviews. I used the interviews in the pilot study to simulate the interviews for the main study. During the pilot study, I interviewed four consenting faculty members who transitioned course materials from Bb to Moodle during 2009-2013. The open ended questions provided faculty participants the opportunity to reflect on their experiences with the transition from Bb to Moodle. However, the use of open ended questions increased the amount of additional information provided by faculty participants. The additional information provided by the faculty made the sorting and coding of data more tedious but provided a very rich source of information about their transition experience. I

conducted the data collection and data analysis in the same manner for both the pilot study and the full study (Appendix F, G, and H).

Research Question

The central research question guiding this phenomenological study, and provided in Chapters 1 and 3, is as follows:

Central Research Question:

How did the transition from Bb to Moodle impact the faculty member's workload, attitudes, and instructional practices at CCC from 2009-2013?

The results of the study may allow administrators and faculty the opportunity to provide a more positive LMS transition in the future. Results of this study are presented with the limitations of the scope of this research.

Research Setting

CCC is a rural, open door admission, two campus, and two year public institution. For academic year 2013-2014, the college employed 72 full time faculty and more than 200 adjuncts. Of the 72 full time faculty, only 10 do not teach a hybrid or online course; however, they may use an LMS to supplement their traditional classroom setting. Forty faculty are from the Career programs or Health programs centers and 32 faculty are from the Liberal Arts and University Transfer Center. Some faculty in the study had migrated to Moodle as early as 2009. However, others may have waited until the 2012-2013 academic year. The result of such a long transition period is that some faculty began working in an earlier version of Moodle. Moodle has been upgraded from version 1.9 to

version 2.4 since 2009. Therefore, some faculty have worked in multiple versions of Moodle while others have only worked in the most recent version of Moodle.

Since 2009, college staff and faculty have experienced significant turnover in academic administration. For example, the Vice President of Academic Affairs has changed twice. Each of the curriculum centers (Healthcare, Liberal Arts & University Transfer, and Career Programs) has changed dean leadership at least once. There have also been two new department chairs (who replaced current chairs) hired as well. In addition to the significant turnover, the funding for programs and staffing has decreased considerably. With the decrease in budget, enrollments have increased. In budget year 2011-2012, state funding was reduced by \$1 million. In 2013-2014, state funding was reduced another \$850,000. The effects of these cuts have been experienced by faculty in the form of reduced supplies, restricted travel, fewer professional development opportunities and reduction in purchasing new equipment. However, course load for full time faculty was reduced in 2009 and has not been increased since that point. Online class sizes have increased slightly from 20 to 30 in some courses.

CCC services students located in the southeastern United States. Students range in age from 13-90. CCC also houses an Early College. CCC Early College services students from grades 9-12 which includes students who are ages 13-20 years. Students who attend the Early College also take courses at CCC during the same time frame. In addition, there are also unique services offered to military students. Students from across the world can take online courses through CCC. However, students outside of CCC area are typically military or military dependents that have relocated to another location.

Demographics

I selected participants for this study via purposeful sampling. Purposeful sampling is utilized to understand and gain valuable insight from a particular selected sample (Merriam, 2014). I chose this target population because the study focused on full time faculty who transitioned a course from Bb to Moodle at CCC from 2009-2013.

I emailed invitations to 72 faculty for the full study. Interested faculty who had transitioned a course from Bb to Moodle from 2009-2013 contacted me through the email address provided in the faculty email invitation (Appendix B). Faculty responded to the email and expressed their interest in being involved in the study by providing electronic consent. Thirteen faculty responded that they were interested in participating. I then contacted each of the 13 faculty members who provided electronic consent and scheduled a private interview that I conducted in a conference room at CCC. I collected audio recordings and field notes from the interviews. I kept the interviewee names, as well as the audio recordings and field notes, in a secure file.

After conducting 13 faculty interviews in the full study, I compared the data collected from one interview to the next, I discovered similarities and differences (Levasseur, 2011). I knew additional data would only have served to confirm the themes determined in this phenomenological study, and there was no additional information or category patterns emerging (Suter, 2012). I took field notes during these interviews and recorded my observations of their responses. I utilized Audacity audio recording software along with a hand held recorder for redundancy.

Data Collection and Analysis

Participants

Thirteen faculty, four men and nine women, were surveyed in the full study. As seen in Figure 1, of the 13 faculty interviewed, two were ages 36-45 years, six were ages 46-55 years, and five were over the age of 55 years. All participants were employed at CCC in a full time capacity. Eight of the faculty interviewed have been employed with the college for more than 10 years. As seen in figure two, eight faculty were from the Career Programs or Health Programs Centers, while five were from the Liberal Arts and University Transfer Center.

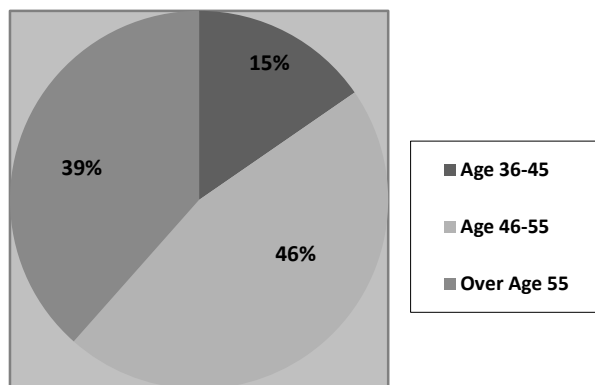


Figure 1. Age distribution. This figure illustrates the age groups of faculty who participated in this study.

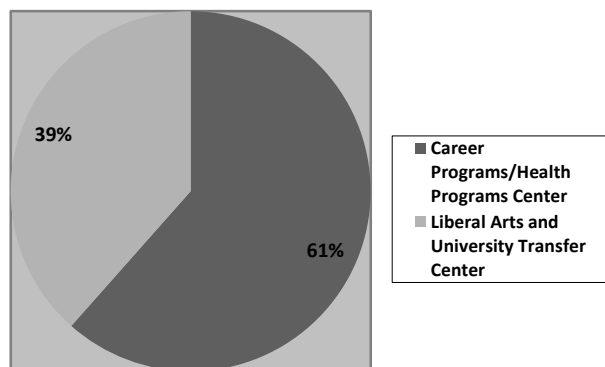


Figure 2. Teaching program distribution. This figure illustrates the program groups of faculty who participated in this study.

Data Collection

Upon approval from the Walden University IRB, I conducted the research for this dissertation. Faculty that participated in the study transitioned a course from Bb to Moodle during the period 2009-2013 and taught a course in Moodle during the same time period. Interviews were conducted so that the faculty could reflect on their experiences, up to this point, transitioning course material and learning the new LMS Moodle. I conducted the 13 interviews over a two week time period. There were no unusual situations encountered in the data collection or variations from the plan presented in Chapter 3.

Interviews lasted between 30 and 90 minutes. Some of the interviews were shorter based on the faculty responses. The interviews occurred at times mutually agreed upon between the faculty member and me. The interviews were digitally recorded and then transcribed. I protected the transcribed interviews by a password on each file and stored

the data via Dropbox in the cloud, as well as, via an external hard drive in my home. I protected both data storage sites with passwords, and I secured the external hard drive in a fireproof safe in my home when it was not in use. Data will be destroyed in five years.

During the interviews, I used a professional tone and took steps to be sure that I did not affect the responses. At the conclusion of each interview, I asked the faculty member to share any additional comments or items that were not stated during the interview. Saturation was ensured and reached when similar data were grouped together from the interviews. Consistent themes and codes emerged. I provided faculty participants the opportunity to respond to interview questions, but additional questions evolved throughout the interview. During the interviews, faculty were able to answer honestly regarding their beliefs and viewpoints. Faculty participants could withdraw at any time, but no one elected to do so. To verify the interviews, I sent an email to each faculty participant with a verbatim transcription of his or her interview. I asked every participant to review the transcript and share any changes he or she determined were needed. I requested that each clarify, correct, or remove anything that did not represent his or her statements or beliefs. Finally, I used NVivo10 to determine themes and patterns in the interviews.

Data Analysis

The data collection methods were successful. I concluded from analyzing the data that faculty had various opinions about Moodle and the impact the transition had on them. I performed the analysis by inputting the transcriptions into NVivo 10 software and then coding the data which revealed themes. I listened to each of the digital

recordings of the interviews and reflected on the remarks that the faculty participants had stated. Once the interviews were put into NVivo 10 each was reviewed again, compiled and analyzed by question. Initially, through NVivo 10, I used each question asked during the interview to collect each individual's primary responses. I then used additional coding to group similar ideas together from every question. As patterns emerged, I added new codes and then coded the responses again to find common themes in their experiences. Open coding was used in NVivo 10 for the words and phrases that linked to general themes that emerged from the transcripts.

Because the coding procedure used was open coding, information was evaluated line by line. This involved evaluating the interviews without a preconceived notion of the direction. Through this process, and guided by the research questions, several central themes of first level coding emerged: time, stability, usability of features, change, support, support roles, and benefits. Data were coded to identify features and attributes. Open coding of interview data allowed me to take the raw data and identify aspects to index and code (Trochim, 2006).

In addition, findings were validated through an external auditor. This process involved asking a person outside the research to conduct a review of the study and ensure my findings were concurrent with the data obtained. I asked a person who retired as an internal auditor from the college in 2013, to serve as the external auditor and sign a confidentiality agreement form (Appendix E). The confidentiality agreement form was signed to ensure the privacy of the participants. The form is in Appendix E. The auditor is external to the process. She read all the transcripts, reviewed the documents that

summarized the themes, and read the findings of the data collection. She then read the final dissertation. She verified that all the data corresponded to the themes and that there was not any evidence of researcher bias.

Evidence of Trustworthiness

Chapter 3 included the variety of strategies to be applied throughout the study regarding trustworthiness. In this chapter, the implementation of the research design addresses the methods applied to support the overall trustworthiness of this study. The four key criteria were credibility, dependability, confirmability, and transferability. These criteria are contained in the following paragraphs.

Credibility

The qualitative validity of this study was established through the results of the data collection/analytic process. Each of the 13 transcribed interviews were member checked by each participant. This provided each participant the opportunity to address any inaccuracies they felt were documented in the interview files. No further feedback was received or requested of participants after the member checking process was complete. I ensured that in-person interviews were similar for all faculty participants and that the interview procedure was followed.

Dependability

Dependability was ensured in this study by providing a detailed description of the data collection and analysis procedures. Audio recordings were transcribed and member checked by the faculty participants to ensure their accuracy. The environment was well defined for this study and interviews were conducted in a secure room. All faculty

participants were currently teaching DL courses using Moodle and had taught in Bb prior to the LMS transition. The same structured interview process was conducted with each faculty participant.

Confirmability

Confirmability of a study is defined as whether the results of the study can be verified by another person or another study and be understood to someone else (Marshall & Roseman, 2011). To ensure confirmability, all transcripts were member checked by faculty participants. In addition, I utilized an external auditor to review the data and the findings, as well as, review the final dissertation for accuracy. My desire was to represent the beliefs of faculty who were impacted by the LMS transition.

Transferability

Because of the small sample size, results from this phenomenological study are not generalizable. Generalizability is the ability to draw inferences about a population founded on data from a sample. Results based on one case cannot necessarily be used to make larger statements about the population. With many qualitative studies, nonprobability samples and small samples sizes are utilized which limit the ability to generalize. (Kalof, Dan, & Dietz, 2008). However, when judging qualitative research credibility, transferability, dependability, and confirmability should be considered. Transferability is the extent that results from one research location can be applied to other settings or situations and is more applicable to qualitative research (Kalof et al., 2008). This study is transferable to other community colleges or university settings as long as the boundaries defined in this research are maintained such as participant selection and

LMSs. This study may not be transferable to other types of situations, such as businesses, who provide training to employees but use an LMS.

Trustworthiness Summary

By completing a pilot study, I was able to ensure that the faculty participants satisfied the criteria for participation. In addition, the pilot study led to modifications of the interview questions to assure that the questions were relevant and produced the anticipated response data. This study supported the four components of trustworthiness. Those components were credibility (believability from the participants viewpoint), transferability (ability to relate the study to another similar setting), dependability (through detailed depiction of research setting), and confirmability (data and results verified by others).

Study Results

This section contains the presentation of the findings. The stated research question guided the analysis. The research question was based on faculty beliefs of the impact to their workload during the LMS transition. The research problem was that CCC's administration did not believe an LMS transition was a significant hardship on faculty and was easily handled with their current workload. I interviewed a total of 13 faculty during the full study, which resulted in data saturation. According to Levasseur (2011), "you typically need a sample of 10 to 20 participants" (p.137) during a qualitative study. It became apparent that the collection of more data would not result in more or different information. The central research question in this study was: How did the transition from Bb to Moodle impact the faculty member's workload, attitudes, and instructional

practices at CCC from 2009-2013? During the interviews, I used a set of 4 questions with additional probing questions to obtain information to answer the central research question. The impact to faculty was addressed with the interview questions. The following section discusses the interview questions, which relate directly to the central research question, as well as, the emerging patterns and themes, with corresponding faculty comments.

Theme 1: Time

Currently, faculty teach 18-20 credit hours, but no more than 24 contact hours. This averages six courses a semester. At CCC, some courses may be only three credit hours but have as many as 10 contact hours. Full-time faculty are required to provide five office hours per week and be physically on campus, regardless of teaching mode, at least 30 hours per week.

Moodle is a new LMS that is used by many educational institutions and instructors across the world. The LMS market is now considered volatile because many faculty and administrators are experiencing migration fatigue (Lokken, 2013). Migration fatigue is the exhaustion faculty and administrators are experiencing because of time and impact to them when migrating to a new LMS. During the interview the faculty participants were asked: How did learning a new LMS, Moodle, affect faculty workloads? All CCC faculty interviewed expressed changes in their workload. All 13 faculty interviewed cited additional time, like Participant 10 who expressed how it affected his workload: “It affected it tremendously. I took about a year to prepare my class in my own time.” Participant 11 also stated how it affected his workload:

Well, I would use the word ‘tremendous’. We had used Blackboard for 10, 11, 15 years, something like that. And Moodle was totally different. Not from the standpoint of teaching online because I am actually a certified online instructor, so I can teach online. I know how to do a group discussion. I know that part of it. But the mechanics of how that particular system, Moodle, worked was totally different from what we were using. When you move into a new system, first of all, you have to see what it even looks like.

Participant 5 stated that there was a significant impact to his workload as well. He stated that

I spent a lot of time at home and on campus after we were done with our usual duties attempting to navigate and move information. There were some things that we actually did different, faculty including myself, elected to continue in a written format or asked for students to email because we were not that familiar with how to utilize Moodle to support different types of learning.

Participant 12 also stated “it affected my workload where it took a lot more time.”

While each faculty participant perceived the exact time impact differently, there was general agreement that the faculty had to allocate significant amounts of time to learning and working in the new LMS. Time can be viewed as an unaccounted for cost. There are several unaccounted costs related to course design. These include leadership and support provided by faculty, department chairs, and others coordinating the design, development, and implementation of new courses. It is much easier to identify and quantify costs that are incurred when instructing online courses versus development

(Neely & Tucker, 2010). Faculty stated that there were several unaccounted for costs, primarily related to the learning process that ongoing with Moodle. Participants 2, 4, 7, 11, and 12 all stated “I am still learning.” Faculty discussed that due to the continuous upgrades of Moodle each year, the learning of the LMS is ongoing. Participant 11 stated “the first Moodle is not the same the second Moodle. So you know it’s still a learning process.”

Faculty discussed how they had to learn Moodle during their spare time, such as evenings or weekends. Participants 1, 6, 10, and 11 all reference working over the summer with Moodle in order for their courses to be ready or for them to learn the LMS. The work lives of college faculty can be perceived to have crumbling borders because of the time devoted to the profession outside of work (Kolowich, 2011). This was evident in this study. Participants 2, 5, and 11 also referenced working at home or on the weekends with Moodle. Seven (54%) of the faculty participants stated during interviews that time outside the institution, outside their 40 hour work week, was needed to transition a course from Bb to Moodle successfully.

Theme 2: Stability

During the interviews, faculty were asked if Moodle met their instructional needs. Ten (77%) of the faculty participants stated that Moodle met their instructional needs. Two (15%) faculty participants stated that Moodle did not fulfil their instructional needs as well as Bb. One faculty participant referenced Moodle as only an assistance to her instruction. Faculty Participant 1 stated “the reason I like it (Moodle) is that you can do so many things with it and it is open.”

Seven (54%) of faculty stated that Moodle was either more reliable or stable than Bb. Three (23%) faculty specifically stated that a positive benefit to meeting the instructional needs of all stakeholders was the stability that the LMS Moodle provides. In addition, four (31%) more faculty mentioned reliability of Moodle when compared to the difficulties experienced utilizing Bb. Many educators view the adoption of new technology as a positive, but for other educators is a contributor to stress (Voakes et al., 2003). Bb's unreliability at CCC caused significant stress for the faculty and students. Therefore, Moodle was chosen because Bb was not meeting the needs of the faculty or students due to poor performance. For faculty in this study, adopting the new LMS, Moodle was mandatory. Therefore, in order to teach at the college, they had to learn the new LMS. Participant 10 stated "it's a lot more stable (than Blackboard)." Participant 4 stated "It's (Moodle) always been stable and doesn't crash and burn for 36 hours like Blackboard used to. But there were some tricky bits that took a while to get used to." Faculty Participant 5 stated "I think it does (meet my instructional needs). The biggest challenge has been to utilize it effectively." Moodle is just one tool educators may use in order to meet their instructional needs.

Faculty may use Moodle and other assortments of teaching approaches to enhance student learning. Many of those tools are via the web. The internet is no longer just a means of gathering information for faculty and students. The internet has developed into an essential educational venue where interpersonal and social relationships can be established or fostered (Shang-Shang, 2010). Participant 10 also had positive things to say regarding Moodle and instruction. She said

Yes, I think it is a good product. I think, as much as I didn't want to make the transition and I wanted to stay in Blackboard, it's a lot more stable as long as I can keep the students away from Internet Explorer. But I actually like it better than Blackboard. It's a better product in my expectation, and it can do what I want it to do.

Theme 3: Usability of Features

During the interviews, faculty were asked if they were satisfied with the features and usability of Moodle. They were asked to explain why or why not. Ten (77%) faculty were satisfied with the features and usability of Moodle. A recent study by Hsu and Chang (2013) revealed that perceived convenience, perceived ease of use, and perceived usefulness are three vital determinants of attitude toward using Moodle. However, perceived ease of use is the most substantial determinant that directly affects attitude. The conclusions also show users' continuance intentions for using Moodle are not a consequence of users' perceptions about how simple it is to use the system or about how the system will help users in their learning process (Hsu & Chang, 2013). The findings of Hsu and Change support the comments provided regarding the features that work in Moodle. For example, Participant 3 stated "you can see exactly what type of object (you are trying to choose)." A summary of the faculty comments on the features that work well in Moodle are provided in the following table:

Table 3

Faculty Responses about What Works Well in Moodle Compared to Bb

Faculty Participant	Features that Work Well in Moodle
Participant 1	Locking down the syllabus quiz
Participant 2	Assignment Feature
Participant 3	More interactive than BlackBoard Ability to imbed videos and I like the new availability to lock it down and force them to take their attendance verification I structured my modules better in Moodle Gives them (faculty) a holistic view of whatever the topic is they are working on More interactive than BlackBoard I think from the student aspect it probably easier
Participant 4	Lots more flexibility and lots more options It's always been a stable system Since we have Respondus, tests have been fairly easy to put together
Participant 5	Nothing
Participant 6	Utilizing TurnItIn I love that I can do that immediately without an extra step of having to add each paper myself.
Participant 7	I think there are a lot more features that Moodle has in comparison to BlackBoard
Participant 8	Nothing
Participant 9	I think it does very well.
Participant 10	Embedding of videos works well in Moodle As long as students don't use Internet Explorer, Moodle seems to be stable I like that I can track exactly what a student has done, what click they have made in Moodle the testing works well
Participant 11	Gotten better with when you remove a student I like the way that we lock down now the syllabus

Table 3 Continued

Faculty	Participant	Features that Work Well in Moodle
Participant 12	<p>Moodle makes it easier for students to access materials It helps with the discussions we have I think it is easy to manage as far as arranging things on the page for students to see and organizing where I have assignments and where they need to go, what they need to do I like the fact that they have labels there where you can organize particular sections You can customize it to fit your language and the way that you want to present things to the student Because of the kind of the flat way that Moodle is set up, you can get to things quicker and easier</p>	
Participant 13	<p>Copying things from semester to semester, It seems to be working a lot better with that I like the online grading within an online assignment It seems to be easier to backup and restore a course I love the maneuverability within Moodle I have not used any html in Moodle The fonts seem to be a whole lot prettier and just more intuitive. You don't get the junky mix of a serif and sans serif and stuff like that</p>	

Additionally, faculty were asked in the interviews about the features of Moodle when compared to Bb. They were also asked what features they believed worked well and what did not work well. Twelve (93%) of the faculty stated particular opinions and examples regarding which features did not work well within Moodle. The table below captures the information stated by the faculty in regards to the features of Moodle when compared to Bb. Faculty openly discussed the advantages and disadvantages of using Moodle. The following tools and features are standard in CCC's Moodle (a) loading and exchanging materials, (b) forums and chats, (c) Tests and surveys, (d) collecting and

correcting assignments, and (e) registering grades and providing feedback. The features of an LMS are essential to faculty because these tools help to provide instruction that is similar to learning experiences in a face-to-face classroom.

Table 4

Faculty Comments on Features That Do Not Work Well in Moodle

Faculty Participant	Faculty Comments on Features that Do Not Work As Well in Moodle Compared to Blackboard
Participant 1	Nothing
Participant 2	Blackboard looked neater Looks kind of like a Facebook page It looks messy to me Grade book confusing Trouble with different browsers
Participant 3	To grade the forms it is horrendous It is hard to see each student's work individually It is harder to control what the students see I think the grade book could be more user friendly I think it is hard to grade You only see a certain amount of people and so much of it at a time You have to scroll with your computer screen and scroll within Moodle itself and it requires a lot of back and forth to grade an assignment and forms
Participant 4	Forums are not as easy to use I've just now have gotten a handle on grade book since we started
Participant 5	Difficulty with grade book Difficult to look across (the screen) whereas in BlackBoard we could pull up a screen that we could see It also seemed to be easier to set up for us with the different types of grading we had going on based on whether it was clinical lab or classroom time A lot of extra work in saving and printing things Once you figure something you have to figure out how it works in the next version

Table 4 Continued

Faculty Participant	Faculty Comments on Features that Do Not Work As Well in Moodle Compared to Blackboard
Participant 6	<p>I am still not comfortable with grade book Discussions were miserable to grade It is not an open discussion. The grading, I just really do not like. I cannot get feedback the way I used to do in Blackboard In Blackboard if I wanted to make a comment to a student I just did it right there but now if I make a comment to a student I have to write it out by hand and after I finish the whole thing, then I can go into the grade book and write it out I do not like the discussion In order to adjust any grades you have to go all the way down and scroll all the way over, it is awful</p>
Participant 7	Trying to identify grades
Participant 8	<p>It does not look user friendly Getting my students on Moodle and teaching them how to use it can sometimes be a chore</p>
Participant 9	The forums. They are awful to grade
Participant 10	The discussion boards in Blackboard I liked better than in Moodle
Participant 11	<p>Blackboard was more versatile There was more flexibility with Blackboard</p>
Participant 12	<p>The journal in Moodle doesn't really work the way that I like to use journals There is extensive scrolling back and forth There's a lot of scrolling back and forth</p>
Participant 13	<p>There are challenges with grading offline assignments in Moodle I think there are still some additional tools we need to get better at</p>

Faculty were given the opportunity to expand on what features they were satisfied with and why, as well as, features that did not work well. With an online learning format, “the tools, the format of the materials, the way of communicating and the time of interaction are different from the conventional classroom teaching environment” (Chen, 2013). Eleven (85%) faculty mentioned how cumbersome the grade book was to manage. Six (46%) faculty also mentioned how difficult the forums (also referred to as discussions) were to manage and grade. Participant 13 stated that the features and usability of Moodle were “still a little cumbersome.” Participant 12 stated “I am mostly satisfied with it (Moodle). There are some things with the new Moodle that I am still figuring out, and that’s a little bit frustrating. But, for the most part, I am satisfied.” Another faculty stated there were some usability issues. Participant 5 stated that:

We are having difficulty with the grade book because of the number of students. We can only view so many at the time. It is really difficult to look across whereas in BlackBoard we could pull up a screen that we could see. It also seemed to be easier to set up for us with the different types of grading we had going on based on whether it was clinical lab or classroom time.

In order to have an efficient learning environment multimedia tools such as the online discussion forum in Moodle can be considered a significant choice for the 21st century (Hsu, 2012). There are also features that some faculty would like to learn more about. For example, Participant 10 wanted to learn more about the lessons feature. Faculty Participant 12 wanted to learn more about the journal feature. Finally, faculty Participant 12 mentioned learning more about the rubric feature.

Theme 4: Preparation

During the interviews, faculty were asked specifically what impact did the transition to Moodle have on designing and providing instruction. Six (46%) faculty believed that Moodle enhanced their experience with designing and providing instruction. Six (46%) of the faculty referenced that Moodle was more interactive, flexible, and easier manage, and offered more features than Bb. Seven (54%) of the faculty had varying responses regarding the impact to designing and providing instruction. Each instructor discussed some impact when designing or providing instruction except for Participant 4. Faculty referenced the time in preparing the course for delivery or time within the course as an impact on their workload was greater. All of the faculty believed that the impact to their workload was significant and warranted additional support. Many colleges and universities follow a traditional model where they pay a stipend to current faculty for course development, while some universities use part time curriculum developers to create courses. Other colleges and universities use some type of a blended model using current faculty and outside experts to develop courses (Neely & Tucker, 2010). However, at CCC, neither was provided. The entire burden of course transition and delivery is on the faculty member.

During the transition from Bb to Moodle, all faculty in this study had to prepare their materials for the new LMS Moodle. Participant 12 stated

I do not know if it's really changed my quality of instruction. In some ways, I guess because Moodle is easier to navigate than Blackboard. Then yeah, I guess it did make it easier for the student to be able to access materials I was trying to

make it more user friendly for the student, (which) made it easier for me to be able to design my course.

Faculty Participant 2 stated

I think the impact is that it takes up more time loading documents, and figuring out how to load them, and figuring out how to make your grade book correct.

And that time is taken away from innovative and creative ideas in instruction.

Faculty Participant 4 did not believe it affected his design and instruction at all. He stated that

Not really much because I've been using kind of the same general scheme for my online classes for the last 5 years or so. So basically I just had to take what I already had and move it because I'm using the same kind of grading pattern, and the same testing sequences, and things like that.

Faculty Participant 1 stated

I think it makes instruction a lot better. Instead of having a textbook the students get the opportunity to review the entire course. They get the opportunity to go in and do certain things, work projects, get instant feedback, they do not have to wait for me to grade it, and I have always felt that immediate response to a student is better than waiting two or three weeks and having to get a phone call and it has not been done. It prompts me to do it in a timely manner so I can give feedback to the students and let them know that you either understand it or you do not.

As a new LMS, Moodle provided a significant learning curve for faculty at CCC. Owen and Demb (2001) found that the faculty work process is significantly different from other types of work and that each faculty member's experience may differ dramatically. The degree of comfort in dealing with technology is not consistent and is very complex. A considerable amount of time is invested when providing student directions or information, setting up courses, and orientating new instructors and students to Moodle. The additional time commitment required of the faculty must be taken into account when planning for an LMS transition (Chen, Guilbaud, Yang, & Tao, 2012).

Theme 5: Support

During the interviews, faculty were asked about the support received during the transition. Faculty were also asked about training and if it was sufficient. In addition, faculty were asked if support was needed from the administration when transitioning to Moodle. Faculty were also inquired to give examples of what support was needed and why. Seven (54%) of the faculty stated that they did not feel supported during the migration to Moodle. Faculty had various experiences with the support offered during the transition. Participant 4 stated "I think I got as much help as I asked for. But having worked with Blackboard, I just kind of tended to work through things myself." Faculty Participant 6 stated "everybody was frustrated, and everybody was doing the best they could." Other faculty had different experiences. For example, Participant 7 stated

If I ever had a problem I could always call or email the director of distance learning who always had a response. If I ever had a problem, she would either

contact me directly or would provide a spot or seat in one of the training scenarios so that was never an issue.

Faculty Participant 8 stated that

Well, the people that they had working in Moodle, I would say did the best that they can. It is still in me becoming Moodlized, it was still going to workshops that turned into question and answer sessions, and so as a novice, I felt left out. I felt that my learning level and maybe some others were way below so I did not feel like I was attended to as I should have been.

Faculty also expressed that additional support was needed. For example, Faculty Participant 1 stated “I think faculty needs to be compensated for it or anybody else that is developing a course.” Participant 10 suggested a course release, money, and structured mentoring were needed during an LMS transition. Participant 12 suggested a course release because this would

Really allow more time to be able to learn these things and then we could actually use innovations and use new techniques and you know not spend all our time learning how to do just basic things, because we’d have more time there.

And then I think that a faculty mentor is also a good idea. Somebody else who’s had more experience with it can definitely give you tips and ideas and help, be a resource.

Infrastructure support for faculty who teach online should be well organized with an ongoing process of improvement. Regardless of how the current infrastructure is, there is always room for improvement. Therefore, faculty teaching online has specific

considerations that are not normally an issue in a campus only type of teaching environment (Meyer & Barefield, 2010). Many colleges and universities put courses or programs online in a relatively haphazard fashion. Course selection is typically driven by instructor interest rather than a department or college based decision making processes. Therefore, it is often a hardship or impossible, for college administrators to monitor their online course offerings and ensure they are of consistently high quality.

As college administrators attempt to achieve greater oversight of their online course offerings, it is suggested that college administrators should consider implementing a more centralized system of quality control. Many college administrators provide a system that allows for greater oversight by incorporating a *virtual campus*. A virtual campus is a centralized portal where all online courses and programs are listed. In order to offer courses online, the virtual campus has a process that requires faculty to utilize a dedicated course designer. The designer works closely with faculty to ensure that their courses map to an online course template (developed by the designer with feedback from faculty). The designer also helps the faculty incorporate instructional tools and strategies that increase student engagement and faculty to student interaction within their course (Smith-Jaggar, Edgecombe, & Stacey, 2013). However, during the transition to Moodle, CCC did not have a virtual campus or online course process that was offered as support for faculty.

Throughout the interviews, support for faculty was referenced as a need. This support was mentioned in various ways. According to the findings in a report published by ASR Analytics (2013), one training session could broaden performance expectancies.

Nine (69%) faculty stated that a course release was needed as support for faculty. Ten (77%) faculty expressed that some form of additional compensation was necessary during the transition. Four (31%) faculty stated that mentors were needed for faculty who transitioned courses. One faculty member suggested hiring additional staff such as another DL director to aid faculty during the transition. All participants expressed that support was needed from administration in the form of compensations, mentorship, and release time.

Community college stakeholders have experienced an enormous impact during the economic downturn that has occurred over the past five years. During the peak of the recession, community colleges were flooded with students and workers attempting to gain additional job skills. College administrators worked tirelessly to meet this demand by expanding online courses and programs. Although the situation is not as dire as it was several years ago, college stakeholders are struggling to address student needs online. College administrators need to address the lack of support in areas such as student retention, student preparedness, course quality, American with Disabilities Act (ADA) compliance, as well as, faculty training and accreditation based assessment (Lokken, 2013).

Theme 6: Support Staff

During the interviews, the faculty were asked how the migration was managed. Seven (54%) of the faculty did not feel the migration was managed well. The migration to Moodle affected all full time faculty. Many institutions have implemented LMSs, which affect the majority of faculty, as a means to facilitate the adoption of online

education. Faculty have revealed that administration must show a commitment to allocating resources and revising policies and procedures to reduce obstacles to faculty and student use of an LMS (Keese & Shepard, 2011). In addition, faculty may believe that they are motivated to use DL when they receive high quality services to overcome problems (Wong & Huang, 2011).

During the interviews, three (23%) faculty reference the specific need for various support staff to assist with the transition. Participant 9 stated that:

I thought it was managed well when support staff got involved with me personally... It was a smooth transition. I am a sight person, not a computer person. We are confident and we are capable of doing it but as long as we feel welcomed to go if we have problems.

Participant 10 stated

I think we were scrambling to get it moved over and, if I recall correctly, there were a lot of changes in personnel and I think it was possibly the best that we could do but it wasn't the best that could have been done.

Participant 13 stated that throughout the transition adjunct faculty "did not have the same people in support roles to help them out, and I think that that was a negative side of it."

Support for faculty is critical in facilitating change. One of the primary roles of leadership is to help faculty and create a shared vision for the technology being used. The shared vision should place emphasis on utilizing technology as part of an ideal learning experience (Ertmer & Ottenbreit-Leftwich, 2010).

Theme 7: Benefits

During the interviews, faculty were asked how they reflected on the transition and if it was worth their time. They were also asked if they thought it was beneficial for their students. Twelve (92%) of the faculty expressed that Moodle was beneficial to utilize. It is important for the faculty to believe that the technology tool they are utilizing is beneficial. Ertmer and Ottenbreit-Leftwich (2010) suggest that opportunities be provided to faculty so that they can witness how the change will benefit their students prior to implementation.

Faculty referenced that the transition was beneficial in several ways. Participant 1 stated “myself as an instructor benefited from it. I know the students benefited from it and the reason I say that is that Bb was a little cumbersome to work with and I am not a technology person.” Participant 13 stated that

Yes. I definitely think it is beneficial for students. The time that went into creating the course, I think was well worth it. The course I actually created I am now teaching for the first time. I created it for spring of 2012. And it still holds up pretty well. It’s still pretty much the same course. It has some video; it has some other user features; but it definitely is better than the Blackboard course we had.

Faculty Participant 2 stated that “I think it’s helpful for seated classes as well as online classes.” Faculty Participant 5 also stated that “I think it is beneficial to students and they like it, especially if they don’t know any difference.”

Summary

The purpose of this phenomenological study was to determine how faculty workloads were impacted during an LMS transition. This chapter included an overview of the pilot study and the results obtained from the full study. This phenomenological study contains a comprehensive analysis of beliefs of faculty who transitioned a course from Blackboard to Moodle. This qualitative research methodology involved the use of a thorough in-person interview with each of the participants. The conclusions that were derived in this qualitative phenomenological study were reached from coding patterns and themes, not through a quantitative approach. Based on individual interviews, I provided evidence in this study that there are considerable impacts to a faculty member when migrating to the new LMS, Moodle.

In this chapter, I provided the findings from the study in the framework of the interview questions discussed. The interview questions attempted to obtain the faculty respondent's opinions and beliefs about the impact to their workload during an LMS transition. The coding and analysis revealed themes, which enabled me to arrive at conclusions regarding the effects to a faculty member during an LMS transition to Moodle. Seven thematic categories resulted from my analysis: time, stability, usability of features, preparation, support, support staff, and benefits. My findings in this study are that faculty have a substantial impact to their workload when migrating to a new LMS.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this qualitative phenomenological study was to determine how faculty perceived the impact to their workload when transitioning from the LMS Bb to Moodle. This chapter contains a summary and interpretation of results, conclusions, and recommendations derived from this qualitative phenomenological study. Chapter 4 contains the themes that emerged from the study, beliefs of the faculty who transitioned materials and their views on the features, usability, and benefits of Moodle. Chapter 5 is divided into multiple sections and includes the findings and interpretations with the intent of understanding the impact to a faculty member during an LMS transition. The first section contains the conclusions about the findings. The next section contains implications for social change grounded in the literature and outcomes provided in Chapter 4. Next are recommendations for action and how the results will be disseminated, followed by a discussion of recommendations for future research. Chapter 5 concludes with a reflection on my experience, personal biases, preconceived ideas, and values, as well as a brief summary.

Overview of the Qualitative Study

The results of the phenomenological study were categorized into seven themes: time, stability, usability of features, preparation, support, support staff, and benefits. The central research question for this study was: How did the transition from Bb to Moodle impact the faculty member's workload, attitudes, and instructional practices at CCC from 2009-2013? This central research question was decomposed into interview questions for the purpose of seeking to understand faculty opinions regarding the impact to a faculty

member during an LMS transition. As provided in Chapter 4, a pilot study was conducted with the objective of testing the validity and usability of the research questions. A pilot study validated the usability of the interviewing questions. The theoretical framework was based on the UTAUT and the diffusion of innovation theory. The sample for this full study was a group of 13 faculty that transitioned a course from Bb to Moodle from 2009-2013 and instructed at least one course using Moodle during that timeframe.

Through qualitative data analysis, themes emerged from the responses of faculty to the research questions. The validity of the themes that emerged from the study was ensured through the timely and structured interviews that were conducted and member checking. All participants were interviewed during the same time frame and were asked the same questions. The responses of the participants were treated with equal representation in terms of analyzing the data. The use of NVivo 10 allowed bias to be eliminated because the data was analyzed systematically and not by person. All faculty indicated that there was a negative impact to their time when they transitioned from Bb to Moodle. Twelve (92%) of the faculty stated that Moodle was a beneficial LMS to utilize. Thirteen (100%) of the faculty in this study expressed that the transition from Bb to Moodle required additional time commitments, and thirteen (100%) of the faculty stated that additional support was needed from the college.

Interpretation of the Findings

The gap in the literature that I addressed in this research occurred between faculty and the impacts to them during an LMS transition. There is extensive research available about utilizing technology, accepting technology and DL with regards to how it impacts

faculty. The UTAUT suggested 70% of the variance in technology acceptance behavior. User acceptance and behavior can directly impact how faculty perceive the new LMS and the impact the transition had on workload. Faculty's intention to adopt learning technology is greater if they perceive the technology is useful and easy to use, and that management supports their efforts (Huang et al., 2011).

There is a gap in the literature about the impacts to faculty when they must transition to a new LMS that is used for DL or to supplement the classroom. There are studies, which are included in Chapter 2, that provide information on the impacts to faculty developing or teaching DL courses. However, there are not studies available that provide impacts to faculty when transitioning to a new LMS such as Moodle. I, as the researcher, looked at how faculty were impacted by the transition to Moodle and how they perceived the benefits and features of Moodle. This section contains interpretations of the findings, including conclusions addressing the research questions posed. The findings of this study are substantiated by the data collected. The findings of this study indicate that overall, there is a significant impact to faculty workloads during an LMS transition and that additional support is needed for faculty. In addition, even after dealing with various LMS issues, faculty found using Moodle beneficial and the system stable.

Central Research Question: How did the transition from Bb to Moodle impact the faculty member's workload, attitudes, and instructional practices at CCC from 2009-2013?

The first theme contained in this study is time. All faculty stated that they believed there was an impact to the workload during the LMS transition. Participant 12

stated that it affected his workload and “it took a lot more time.” All of the faculty participants indicated that additional time was needed to migrate courses from Bb to Moodle successfully. Faculty that are teaching online spend more time investing in their work than those who teach face-to-face (Bollinger & Wasilik, 2009). Therefore, transitioning to a new LMS adds an even greater impact on their workload. The feedback from faculty participants was that time to learn Moodle and transition a course from Bb to Moodle varied from several hours to an entire year. The findings indicated several significant themes including: (a) time, (b) stability, (c) usability of features, (d) preparation, (e), support, (f) support staff, and (g) benefits. These themes emerged as essential elements of this phenomenological study.

In response to the second question posed to faculty in the study, ten (77%) of the faculty communicated that Moodle met their instructional needs. Research by Bollinger and Wasilik (2009) suggested that faculty satisfaction is also an important factor of quality in online courses. Institutional barriers such as problems with technology, workload issues, and adequate compensation can have a negative impact on faculty. Faculty Participant 11 stated that Moodle is regularly upgrading and changing. Because of these continuous upgrades, learning Moodle is ongoing. According to Bair and Bair (2011), the instructional environment and actual classroom teaching time is not defined well in online courses. Online teaching is not only more work, but also a different kind of work than what traditional instructors are accustomed to doing. Online instruction takes more forethought. Email must be checked more frequently and responses to students concerns must be addressed individually more often (Bair & Bair, 2011). While the LMS

Moodle did meet the faculty's needs, the impact to their work was considerable when coupled with online teaching and the LMS transition.

Faculty were asked if they were satisfied with the features and usability of Moodle. Ten (77%) of the faculty were satisfied. Eleven (85%) faculty mentioned that the grade book was difficult to manage or cumbersome to operate when compared to Bb. Six (46%) of the faculty interviewed also stated that the forums (also referred to as discussion boards) were difficult to manage or grade compared to Bb. Both the grade book and forums are vastly different in Moodle than in Bb. According to Zhang and Xu (2011), compatibility plays a significant role in acceptance of replacement technologies. The more users consider a replacement technology as being compatible with legacy technology the more likely they will accept it. The grade book and forums in Moodle were not considered compatible with Bb.

Faculty in the study were asked if they felt supported by the administration. Six (46%) of the faculty expressed that they were supported by the administration during the transition from Bb to Moodle. Six (46%) faculty also believed that the migration was managed well by the staff. However, 100% of faculty stated that additional support was needed for the faculty. According to Kenny, Banerjee, and Newcombe (2010), faculty have been unable to engage in training and use technology tools in their classrooms due to obstacles such as lack of time and conflicting priorities. The faculty echoed those beliefs in this study as well.

The American Association of State Colleges and Universities explains that there is a gap between the increase in DL offerings by colleges and the preparedness of the

institution to meet the needs of the students and faculty who teach those courses (Orr, Williams, & Pennington, 2009). Nine (69%) faculty stated that a course release was needed in order to provide adequate time and training for the transition to the new LMS Moodle. Ten (77%) faculty stated that additional compensation should have been provided during the transition because of the extra duties and time imposed on them. Four (31%) of the faculty expressed that faculty mentors would have been beneficial during the LMS transition. Additional support in various forms was needed according to 100% of the faculty participants.

Irvine and Birch examined the effects of UTAUT variables on faculty acceptance. Irvine and Birch stated that it was likely that the primary measure of effort expectancy was the technology skill level of the faculty. Therefore, they concluded that in order for technology utilization to be effective, educators need to be shown that it is possible to use technology and integrate it into their lessons without difficulty. Support for faculty should be given by providing instruction on the basics of the technologies that will be the most useful to the faculty. In addition, the faculty should be shown ways to integrate the technology into their classrooms effectively (Birch & Irvine, 2009). Thirteen (100%) of the faculty in this study voiced that additional support was needed. These findings align with this study as well. Faculty were not required to learn the basics of the technology beforehand and were not shown ways to integrate the technology into their classroom.

According Voakes, Bean, and Ogan (2003), most educators believe they are learning new technologies continually. While faculty appreciate the technical support they receive from staff, they also believe they need more assistance in learning new

technologies. (Voakes, Bean, & Ogan, 2003). Faculty referenced throughout this study that they were continuing to learn the new LMS and that the new LMS had changed multiple times since it was adopted in 2009. In addition, faculty expressed that they were still learning the new LMS, even though several had transitioned to Moodle in 2009. Moodle has various versions that continue to change. Not only were faculty having to learn a new LMS, but once they transitioned over to Moodle, the LMS was routinely being updated. These updates would be in the form of enhanced interfaces and features. Those enhancements required faculty to learn to utilize new items in the LMS, which added additional burdens to them.

Limitations of the Study

This research was aligned with the purpose of reporting the beliefs of participants and has some limitations, in spite of undertaking steps described in Chapters 3 and 4, to assure credibility, transferability, dependability, and confirmability. A limitation of this study is the approach utilized. Qualitative research may be subjective as it only focuses on opinions and beliefs of a selected group of individuals. In addition, the results are not tested statistically or via a quantitative method. Therefore, the interpretations were left solely up to me with a confirmation by an outside auditor. The number of the sample utilized in this study is not the entire population at CCC that transitioned a course from Bb to Moodle. Therefore, the findings may not represent the whole population, even though 13 faculty with representation from each of the centers in the college was interviewed. Since the entire faculty population was not represented, this may result in generalizability being difficult at other institutions.

This study is also bound by the social context of CCC, which has experience with both Bb and Moodle. Other colleges may not be transitioning from Bb to Moodle. They may be utilizing other LMSs. Specifically, the study only focused on full time faculty in all the academic centers at the college. Adjuncts were not interviewed. This study is also restricted in terms of its focus. The research only focused on the transition from Bb to Moodle as it pertains to full time faculty at CCC. Other aspects of technology or technology tools were not explored. These other issues or technologies could have a direct influence on the impact to a faculty member during an LMS transition. Finally, it is also possible that the setting in each of the academic centers at the college differ from each other. These differences may have had a significant impact on the respondent's opinions about the impact to them.

Recommendations

There are numerous LMSs available on the market today. According to Wong and Huang (2011), an LMS's quality has a positive effect on the acceptance and use of DL technology. DL technology has a positive impact on organizational learning effectiveness, and the acceptance and use of an LMS plays a full mediating role in the relationship between the LMS's quality and the organizational learning effectiveness. Thus, when implementing DL, administrators should manage both the LMS and the quality of the online learning. (Wong & Huang, 2011). However, there are significant learning curves that accompany such LMSs. If a new LMS is introduced to faculty, learning how to utilize the system must occur, or the LMS may be useless. Support for faculty in how to use the system should also be offered to faculty.

The LMS Moodle offers faculty the opportunity to provide instruction in a managed system. Moodle can be utilized to support a face-to-face course or used to instruct thoroughly DL courses. For online courses, Moodle offers faculty and students a place where synchronous collaboration can occur as well as asynchronous learning. Students can prepare various types of projects or demonstrations and share them within the system. However, faculty must understand how to utilize the features and functions of the system.

Faculty were asked in interview question #1: how did learning a new LMS, Moodle affect faculty workloads? All of the faculty interviewed stated that additional time was added to their work. Faculty and administrators can use the results of this phenomenological study when planning LMS migrations or other technology transitions to ensure faculty have the necessary time available in their work schedules and plan for the additional workload impacts. During the study, all faculty stated that additional support was needed. This support may be supplied by a course release, which will provide additional time for the faculty member to learn and develop a new course, or the institution can provide additional compensation. Recommendations include that faculty and administrators evaluate the impacts and provide substantial support during an LMS transition. For example, faculty Participant 1 stated that “faculty needs to be compensated for...developing a new course.” Faculty Participant 10 stated that a course release, money or mentoring were needed. In addition, faculty mentors could provide additional support to faculty as they transition a course to a new LMS.

I recommend that when a college determines it will transition to a new LMS that the college incorporate a plan to reduce any potential negative impacts to a faculty member. Faculty Participant 5 stated that “I spend a lot of time at home and on campus...attempting to navigate and move information. We were not familiar with how to utilize Moodle.” The plan should contain information about allotting time for development, training, mentoring, communication, and one on one assistance. Ryan, Toye, Charron and Park (2012) suggest that tutorial sessions be provided for faculty. In addition the faculty should be involved in the technology transition planning. Students should be trained in the new technology. The technology should be reliable, pilot tests should have occurred, and access to support is easy and readily available to include comparisons of the old technology to the new technology (Ryan et al., 2012).

Faculty were asked in the second interview question if they believed that Moodle meets their instructional needs when teaching DL courses. Ten (77%) of the faculty stated that the system did meet their instructional needs. Faculty also stated that the new LMS Moodle was considerably more stable than Bb. Faculty stated that the LMS Moodle did not have considerable downtime as was previously experienced with Bb. Faculty also had confidence that tests were not timing out, etc.

Recommendations include providing options for interested faculty to examine higher level tools available in Moodle. Three (23%) of the faculty mentioned wanting additional training in advanced tools during the interviewing process. This training does not have to be required, but would be beneficial for faculty seeking to use higher level instructional tools. For example, faculty Participant 10 and 12 stated that they wanted to

know more about specific tools such as the lesson, rubric, and journaling. After a few semesters of utilizing these advanced tools, data gathered could be examined and analyzed for patterns or themes. These patterns or themes could be utilized to get a better understanding if these tools meet instructional needs of the faculty, if additional faculty would be interested in using them, and if they are beneficial for faculty to utilize. In addition, training in using these additional tools would also be beneficial to faculty for specific course activities. Faculty Participant 13 stated that features were “still a little cumbersome.” According to Onyia and Onyia (2011), training should be a requirement for all academic staff in the area of information technology communication tools. Onyia and Onyia also suggested that “faculty integration of technology in their classroom instruction should be supported by university administration by providing functional infrastructure that will ensure the ease of academic staff access to it within the campuses” (p. 91). Faculty Participant 12 wanted to utilize the journaling feature in his online Moodle course but “could not figure out how to use it.”

Faculty were asked during interview question two, if they were satisfied with the features and usability of Moodle, what their opinions were about the features of Moodle compared to Bb, and what did they believe works well in the LMS and what does not. Ten (77%) of the faculty were satisfied with the features and usability of Moodle. Eleven (85%) of the faculty stated that the grade book was cumbersome to manage, and six (46%) of the faculty stated that the forums were difficult to manage or grade. Results on the satisfaction with Moodle have varied in several studies. Martin-Blas and Serrano-Fernandez implemented Moodle to supplement their physics course and found that the

students who used Moodle received higher marks than those who did not (Martin-Blas & Serrano-Fernandez, 2009). However, Carvalho, Areal, and Silva (2011) found that more students had a preference for Bb than Moodle. Since eleven (85%) of the faculty felt the grade book was cumbersome to manage, recommendations include providing required training around utilization of the grade book. In addition, six (46%) of the faculty felt the forums were difficult to manage and grade. Faculty may benefit from training around how to utilize and manage forums in their DL classes. In addition, providing tutorial quick reference sheets for faculty to utilize when entering grades or utilizing the forums may be helpful in eliminating the faculty's frustration with these items.

During interview question two, faculty were also asked about the impact of the new LMS with regards to designing and providing instruction. Faculty discussed in various ways how information appeared in Moodle compared to how it was delivered in Bb. Faculty had to examine ways to prepare their Moodle course differently. Six (46%) of the faculty referenced that Moodle was more interactive and offered more features than Bb. Nine (69%) of faculty conveyed it made instruction better. Seven (54%) of the faculty stated additional training was needed regarding designing their courses. I would recommend that course design training be offered for faculty prior to an LMS transition. In addition, during this training faculty see completely matured courses utilizing various features of Moodle that were not available in Bb. This would allow faculty to see various ways that instruction can be delivered via Moodle

Faculty were asked during interview question three if they believed they were supported during the migration to Moodle. Six (46%) of the faculty conveyed that they

were supported during the migration to Moodle. However, 100% of faculty expressed that additional support was needed. Liu (2011) found that a lack of knowledge about how to use technology effectively was a barrier to teachers who are trying to decide about a particular technology (Liu, 2011). Faculty voiced that additional support was needed in the form of a course release, additional compensation, and faculty mentoring. Klassen, Al-Dhafri, Hannok, and Betts (2011) found that administrators should provide funding for faculty development that will engage students with teachers in the learning. I would recommend that when administrators decide to transition to a new LMS, they ensure they have an adequate support plan in place. This plan, as suggested by the faculty in this study, could include compensation and mentors. In addition, I would recommend talking with faculty to determine what their wants and needs are first. These steps may provide the support that the faculty of this study believe is needed during an LMS transition.

During interview question three faculty were also asked if they felt the LMS migration was managed well. Seven (54%) of the faculty expressed that the migration was not managed well as it should have been. Four (31%) of the faculty suggested that additional support staff were needed. Additional support staff may provide a better management migration. Faculty Participant 8 stated that “the people they had working in Moodle...did the best they can.” Many institutions have DL centers that assist faculty in the design and development of their courses. These centers are staffed with DL experts and instructional designers. In addition, many institutions also have robust centers for learning, such as a Center for Teaching and Learning, which train faculty in DL techniques and other pedagogy. One faculty participant specifically stated that hiring

additional DL staff would aid faculty during the transition. I recommend that a sufficiently staffed DL and instructional design department also support an LMS transition. CCC employed one Director of DL. However, this one person cannot assist with instructional design and innovation as needed for all faculty. Faculty Participant 12 stated that “somebody else who’s had more experience with it (Moodle) can definitely give you tips and ideas and help.”

Faculty were also asked during interview question three if they believed the transition to the new LMS was beneficial for students. Twelve (92%) of the faculty interviewed stated that Moodle was beneficial for students to utilize. Faculty Participant 13 stated that “I definitely think it (Moodle) is beneficial for students... The course I created... has some video; it has some other features; it is definitely better than the Blackboard course we had.” Although faculty felt Moodle was beneficial to students they did not know this until they utilized the Moodle platform. Therefore, I suggest that comparisons should be made to the LMS currently being utilized. These comparisons will help faculty in determining if they want to adopt the technology or not. Zhang and Xu (2011) found that decision makers should understand that there are benefits of choosing replacement technologies that are compatible with legacy technologies. Choosing compatible technologies will encourage adoption by faculty (Zhang & Xu, 2011). I recommend that training include similarities between the two LMSs. In addition, I also recommend that faculty understand what can easily transition from one system to another system. Students at CCC utilize Moodle in the majority of their courses. Many courses have interaction, assignments and a grade book through Moodle whether the courses is

taught online, face-to-face or a hybrid delivery. Kamarulzaman, Madun, and Ghani (2010) found that students find Moodle useful and helpful in their learning process (Kamarulzaman et al., 2010).

Recommendations for Future Research

This phenomenological study examined faculty at a one community college in the southeastern United States. I suggest the use of different research methods for future studies. The results of this study are limited to 13 faculty experiences. Utilizing a quantitative methodology would enable the researcher to obtain information from a more diverse sample and additional collegiate settings. Utilizing a quantitative research method would also allow for the use of various statistical tools to examine the significance of the results. Employing a mixed methodology approach is also suggested. This research methodology would allow the researcher to gather data from a diverse set of faculty and conduct detailed, comprehensive interviews about the problem. In addition, similar studies at community colleges across the nation could be conducted. This approach would enable the researcher to compare the impacts to faculty across institutions and examine what support was needed by faculty at other institutions compared to the findings of this study.

This study examined only one community college. A study on the impact to faculty during an LMS transition where faculty were provided support in the form a course release, stipend and/or mentors is suggested. This would evaluate if the suggestions provided by faculty in this study were reasonable or accurate. This

recommendation aligns with the findings that show additional support in the form of course release, stipend, and mentors were needed during the LMS transition.

Lastly, according to the UTAUT, effort expectancy is a significant predictor of faculty's intentions in using technology (Irvine & Birch, 2009). Additional studies similar to this one could be completed after faculty have been trained in the new LMS and have been shown how the LMS is a viable option to utilize.

Implications

Social change can mean a variety of things to many different people. Walden University refers to social change as

Involvement in activities that improve the lives of individuals and communities locally and around the world. It includes a range of activities, such as volunteering or service; donating money, goods or services, and educating others about a particular issue or cause (Walden University, 2014).

All of the faculty interviewed stated that there is a significant impact to faculty workload during an LMS transition. All faculty stated that additional time was needed when transitioning to a new LMS. Faculty stated that additional compensation, course releases, and a stipend were necessary due to the negative impacts to workload. The findings offer a significant contribution to the understanding of the impacts to faculty with the transition to a new LMS. The findings educate others about the negative impact to faculty during an LMS transition. It is critical that faculty believe they are involved and worthy when charged with adopting a technology innovation such as an LMS. Faculty acceptance is also crucial for the technology tool to be utilized and successful (Hall & Hord, 2011).

Implications for social change are in terms of tangible improvements to faculty and organizations, such as a college, that transition to a new LMS. Results of this study may enable college administrators to address the adverse impacts to faculty prior to them occurring. The findings provide beneficial information toward addressing the concerns and fears of faculty as they relate to technology changes in their instruction. Insights from this study also inform personalized interventions and strategies that may help alleviate or resolve impacts to faculty workload and support a move toward a more reasonable approach.

Educational leaders, such as the administration of CCC, should identify and acknowledge the concerns of faculty in order to increase the potential for success of innovations (Hall & Hord, 2011). Bringing awareness of the features in Moodle that are cumbersome to utilize, may provide administrators, course designers, and DL professionals an opportunity to resolve these issues early. To summarize, this study contributes to enabling positive social change in that it provides information that college stakeholders can use when implementing an LMS migration. These findings also imply that administrators should be more open to listening to faculty regarding impacts to their workload during technology transitions or new technology adoption. Ensuring that faculty are prepared for teaching and working with students should be a top priority of college administration.

Reflections

As a doctoral student, I have found that the dedication and determination required for the research process to be a beneficial learning experience. My personal experience

with Moodle and Bb lead me to this dissertation. At the time when the research began for this study, my institution was starting to transition to Moodle. I found that the administration did not believe additional support was needed and that the transition would be very simple for faculty. However, faculty did not have the same opinion. Many colleges in the United States have migrated to Moodle or are in the process of doing so. Employing the research process I used, others may replicate or expand my study. Next steps include writing an article to be published with my findings as well as sharing my results with colleges in the United States who are considering migrating to a new LMS.

Conclusion

This study adds new information to a body of literature on the experiences of faculty who utilize LMSs. When transitioning to a new LMS, such as Moodle, there are numerous impacts to a faculty member in regards to workload and instructional practices. Providing adequate support to faculty during an LMS transition could help faculty more efficiently transition their courses and provide for a more satisfied and prepared faculty member. Faculty stated that additional support in the form of a course release, additional professional development, additional support staff, mentoring, and compensation was needed. Faculty also stated that Moodle was a satisfactory instructional tool, even though there were issues with several of the features. These results are relevant to the field of education because many colleges and universities are considering migrating to a new LMS and utilizing new technologies by all of their faculty.

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Appendix A: Interview Guide

Faculty Interview Questions Form for the Researcher

I am a doctoral student at Walden University. I am performing this study to investigate the impact of a Learning Management System transition on Faculty. This interview will take 30-90 minutes to complete and is being audio recorded. I appreciate your help in performing my research. You will receive a copy of the audio transcription and will be asked for feedback. This is called 'memberchecking'. If you have any questions about the interview, please feel free to contact me.

Email address: _____
Contact number: _____

Interview Questions

Intro:

- Please state your name and college affiliation.
- How long have you been using Moodle to provide instruction?
- Approximately, How many classes have you instructed in Moodle at Craven? What courses are they?

1. How did learning a new LMS, Moodle, affect your (faculty) work-loads?

Probing Questions:

How much time did it take you to learn the new LMS?
How much time did it take for you to transition your course from Bb to Moodle?
Was the training that was offered, sufficient? Why or why not?
What impact did this transition have on designing and providing instruction?

2. Do you feel that Moodle meets your instructional needs when teaching distance learning courses?

Probing Questions:

Are you satisfied with the features and usability of Moodle? Why or why not?
How do you feel about the features of Moodle compared to Bb? What do you feel works well in Moodle and what does not?
Do you like Moodle more or less than Bb? Why?

3. Did you feel supported during the migration to Moodle? Why or why not?

Probing Questions:

Did you feel that the LMS migration was managed well? Why or why not?
How do you reflect on the transition to a new LMS? Was it worth your time? Is it beneficial for students?

4. Do you feel support is needed from administration/college when faculty transition a course from Blackboard to Moodle?

Probing questions:

If you feel support is necessary, what support would you suggest? Why? (Examples of additional support could be course releases, monetary compensation, or faculty mentors)

Closing

- Would you like to share anything else about your experience?
- Please describe any ideas you feel were left out that you would like to tell me

Appendix B: Email Invitation

Full Study Email Invitation to Faculty (This is not a consent form)

My name is Karla Page Jones and I am a doctoral student at Walden University. You also know me as an employee of [redacted].

However, this research study is separate from that role. As a doctoral student at Walden, I am working on my doctoral dissertation, "Impacts on Faculty During a Learning Management System Transition". You are invited to take part in this research study, if you so desire. *Your participation is completely voluntary.* You are invited to participate in this study because you are an instructor at [redacted] who transitioned a course from Blackboard to Moodle during 2009-2013. You also provided instruction in Moodle at [redacted] from 2009-2013. This study will investigate impacts to a faculty member during a Learning Management system transition. This announcement is being sent to allow you to understand this study before deciding whether to take part.

Criteria:

- Participants should be full-time faculty members.
- Participants should have transitioned a course from Blackboard to Moodle at [redacted] from 2009-2013
- Participants should have instructed a course utilizing Moodle at [redacted] from 2009-2013

Procedures:

The purpose of this qualitative study is to explore the implications to faculty who teach distance learning and must migrate from the LMS Bb to Moodle. These implications can aid administrators and instructional designers in providing a more positive LMS transition for faculty in the future. The interviews will be audio recorded.

If you agree to participate in this study, please do the following.

Step 1: Open the attached consent form and read it. This consent form further describes what is expected of you as a faculty member in this study.

Step 2 : If you agree to participate in the study, follow the steps for e-consent provided on the consent form. (If you choose to participate and provide e-consent, I will schedule the interviews with you.)

Contacts and Questions:

You may ask any questions you have now or if you have questions later, you may contact the researcher via karla.jones@waldenu.edu.

Thank you for your consideration,
Karla Page Jones

Appendix C: Full Study Email Reminder

Full Study Email REMINDER Invitation to Faculty (This is not a consent form)

This email is a reminder of an invitation to the study “**Impacts on Faculty During a Learning Management System Transition**”. This study is voluntary. Everyone will respect your decision of whether or not you choose to be in the study. No one at [redacted] will treat you differently if you decide not to be in the study.

My name is Karla Page Jones and I am a doctoral student at Walden University. You also know me as [redacted].

However, this research study is separate from that role. As a doctoral student at Walden, I am working on my doctoral dissertation, “**Impacts on Faculty During a Learning Management System Transition**”. You are invited to take part in this research study, if you so desire. *Your participation is completely voluntary*. You are invited to participate in this study because you are an instructor at [redacted] who transitioned a course from Blackboard to Moodle during 2009-2013. You also provided instruction in Moodle at [redacted] from 2009-2013. This study will investigate impacts to a faculty member during a Learning Management system transition. This announcement is being sent to allow you to understand this study before deciding whether to take part.

Criteria:

- Participants should be full-time faculty members.
- Participants should have transitioned a course from Blackboard to Moodle at [redacted] from 2009-2013
- Participants should have instructed a course utilizing Moodle at [redacted] from 2009-2013

Procedures:

The purpose of this qualitative study is to explore the implications to faculty who teach distance learning and must migrate from the LMS Bb to Moodle. These implications can aid administrators and instructional designers in providing a more positive LMS transition for faculty in the future. The interviews will be audio recorded.

If you agree to participate in this study, please do the following.

Step 1: Open the attached consent form and read it. This consent form further describes what is expected of you as a faculty member in this study.

Step 2 : If you agree to participate in the study, follow the steps for e-consent provided on the consent form. (If you choose to participate and provide e-consent, I will schedule the interviews with you.)

Contacts and Questions:

You may ask any questions you have now or if you have questions later, you may contact the researcher via karla.jones@waldenu.edu.

Thank you for your consideration,
Karla Page Jones

Appendix D: Full Study Consent Form

FULL STUDY CONSENT FORM

You are invited to take part in a research study of **Impacts on Faculty During a Learning Management System (LMS) Transition**. The researcher is inviting full-time faculty who have instructed courses via Blackboard at _____ transitioned at least one course from Blackboard (Bb) to Moodle from 2009-2013 at _____ and instructed at least one course in Moodle from 2009-2013 at _____ to be in the study. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Karia Page Jones, who is a doctoral student at Walden University. You may already know the researcher as _____, but this study is separate from that role.

Background Information:

The purpose of this study is to explore the impact on faculty when migrating to a new LMS. Qualitative methods will be employed to examine faculty at _____ that have previously taught distance learning and have migrated courses from Bb to Moodle in an effort to provide a deeper understanding of the effects to a faculty member.

Procedures:

If you agree to be in this study, you will be asked to:

- _____ Participate in a face to face interview that will be audio recorded. This may take 30-90 minutes.
- _____ Review the transcription of the interview for accuracy. This may take 30-90 minutes.

Here are some sample questions:

_____ How did learning a new LMS, Moodle, affect faculty work-loads (i.e. how much time did it take the faculty member to learn the new LMS)?

_____ Does faculty feel that Moodle meets their instructional needs when teaching distance learning courses?

Voluntary Nature of the Study:

This study is voluntary. Everyone will respect your decision of whether or not you choose to be in the study. No one at _____ will treat you differently if you decide not to be in the study. If you decline or discontinue participation with the study, this will not negatively impact the participant's relationship with the researcher or the school. If you decide to join the study now, you can still change your mind during or after the study. You may stop at any time.

Risks and Benefits of Being in the Study:

Being in this type of study involves some risk of the minor discomforts that can be encountered in daily life, such as fatigue or stress. Being in this study would not pose risk to your safety or wellbeing.

The benefits of this study are that administrators and instructional designers will understand how to support faculty in the LMS migration process. Faculty will understand the effects of an LMS migration. Administrators will understand the workload impacts to faculty and perceived needs of faculty.

Payment:

There are no payments or financial rewards for participating in this study.

Privacy:

Any information you provide will be kept confidential. The researcher will not use your personal information for any purposes outside of this research project. Also, the researcher will not include your

1 of 2

name or anything else that could identify you in the study reports. Data will be kept secure by online storage protected via a password. Backup of the data will be stored in the researchers personal safe. Data will be kept for a period of at least 5 years, as required by the university.

Contacts and Questions:

You may ask any questions you have now. Or if you have questions later, you may contact the researcher via phone at _____ or via email at karia.jones@waldenu.edu. If you want to talk privately about your rights as a participant, you can call Dr. Lellani Endicott. She is the Walden University representative who can discuss this with you. Her phone number is 1-800-925-3368, extension 3121210. Walden University's approval number for this study is _____ and it expires on _____.

The researcher will give you a copy of this form to keep.

Statement of Consent:

I have read the above information and I feel I understand the study well enough to make a decision about my involvement. By replying to the email this form was attached to with the words "I consent" in email to karia.jones@waldenu.edu I understand that I am agreeing to the terms described above.

Appendix E: Confidentiality Agreement

CONFIDENTIALITY AGREEMENT**Name of Signer:**

During the course of my activity in collecting data for this research: "Impacts on Faculty During a Learning Management System Transition" I will have access to information, which is confidential and should not be disclosed. I acknowledge that the information must remain confidential, and that improper disclosure of confidential information can be damaging to the participant.

By signing this Confidentiality Agreement I acknowledge and agree that:

1. I will not disclose or discuss any confidential information with others, including friends or family.
2. I will not in any way divulge, copy, release, sell, loan, alter or destroy any confidential information except as properly authorized.
3. I will not discuss confidential information where others can overhear the conversation. I understand that it is not acceptable to discuss confidential information even if the participant's name is not used.
4. I will not make any unauthorized transmissions, inquiries, modification or purging of confidential information.
5. I agree that my obligations under this agreement will continue after termination of the job that I will perform.
6. I understand that violation of this agreement will have legal implications.
7. I will only access or use systems or devices I'm officially authorized to access and I will not demonstrate the operation or function of systems or devices to unauthorized individuals.

Signing this document, I acknowledge that I have read the agreement and I agree to comply with all the terms and conditions stated above.

Signature:**Date:**

Appendix F: Pilot Study Email Invitation

Pilot Study Email Invitation to Faculty (This is not a consent form)

My name is Karla Page Jones and I am a doctoral student at Walden University. You also know me as

However, this research study is separate from that role. As a doctoral student at Walden, I am working on my doctoral dissertation, “**Impacts on Faculty During a Learning Management System Transition**”. You are invited to take part in this pilot study, if you so desire. *Your participation is completely voluntary.* You are invited to participate in this study because you are an instructor at _____ who transitioned a course from Blackboard to Moodle during 2009-2013. You also provided instruction in Moodle at _____ from 2009-2013. This pilot study will investigate impacts to a faculty member during a Learning Management system transition. This announcement is being sent to allow you to understand this pilot study before deciding whether to take part.

Criteria:

- Participants should be full-time faculty members.
- Participants should have transitioned a course from Blackboard to Moodle at _____ from 2009-2013
- Participants should have instructed a course utilizing Moodle at _____ from 2009-2013

Procedures:

The purpose of this qualitative study is to explore the implications to faculty who teach distance learning and must migrate from the LMS Bb to Moodle. These implications can aid administrators and instructional designers in providing a more positive LMS transition for faculty in the future. The interviews will be audio recorded.

If you agree to participate in this study, please do the following.

Step 1: Open the attached consent form and read it. This consent form further describes what is expected of you as a faculty member in this study.

Step 2 : If you agree to participate in the study, follow the steps for e-consent provided on the consent form. (If you choose to participate and provide e-consent, I will schedule the interviews with you.)

Contacts and Questions:

You may ask any questions you have now or if you have questions later, you may contact the researcher via karla.jones@waldenu.edu

Thank you for your consideration,
Karla Page Jones

Appendix G: Pilot Study Email Reminder

Pilot Study Email Invitation *Reminder* to Faculty (This is not a consent form)

This email is a reminder of an invitation to the pilot study “**Impacts on Faculty During a Learning Management System Transition**”. This pilot study is voluntary. Everyone will respect your decision of whether or not you choose to be in the study. No one at (will treat you differently if you decide not to be in the study.

My name is Karla Page Jones and I am a doctoral student at Walden University. You also know me

(However, this research study is separate from that role. As a doctoral student at Walden, I am working on my doctoral dissertation, “**Impacts on Faculty During a Learning Management System Transition**”. You are invited to take part in this pilot study, if you so desire. *Your participation is completely voluntary.* You are invited to participate in this study because you are an instructor at (who transitioned a course from Blackboard to Moodle during 2009-2013. You also provided instruction in Moodle at (from 2009-2013. This pilot study will investigate impacts to a faculty member during a Learning Management system transition. This announcement is being sent to allow you to understand this pilot study before deciding whether to take part.

Criteria:

- Participants should be full-time faculty members.
- Participants should have transitioned a course from Blackboard to Moodle at (from 2009-2013
- Participants should have instructed a course utilizing Moodle at (from 2009-2013

Procedures:

The purpose of this qualitative study is to explore the implications to faculty who teach distance learning and must migrate from the LMS Bb to Moodle. These implications can aid administrators and instructional designers in providing a more positive LMS transition for faculty in the future. The interviews will be audio recorded.

If you agree to participate in this study, please do the following.

Step 1: Open the attached consent form and read it. This consent form further describes what is expected of you as a faculty member in this study.

Step 2 : If you agree to participate in the study, follow the steps for e-consent provided on the consent form. (If you choose to participate and provide e-consent, I will schedule the interviews with you.)

Contacts and Questions:

You may ask any questions you have now or if you have questions later, you may contact the researcher via karla.jones@waldenu.edu

Thank you for your consideration,
Karla Page Jones

Appendix H: Pilot Study Consent Form

PILOT STUDY CONSENT FORM

You are invited to take part in a pilot research study of **Impacts on Faculty During a Learning Management System (LMS) Transition**. The researcher is inviting full-time faculty who have instructed courses via Blackboard at _____, transitioned at least one course from Blackboard (Bb) to Moodle from 2009-2013 at _____ and instructed at least one course in Moodle from 2009-2013 at _____ to be in the study. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

This pilot study is being conducted by a researcher named Karla Page Jones, who is a doctoral student at Walden University. You may already know the researcher as _____, but this study is separate from that role.

Background Information:

The purpose of this pilot study is to explore the impact on faculty when migrating to a new LMS. The pilot study will also enable the researcher to determine if methods or questions should be changed before completing the full study.

Procedures:

If you agree to be in this pilot study, you will be asked to:

- _____ Participate in a face to face interview that will be audio recorded. This may take 30-90 minutes.
- _____ Review the transcription of the interview for accuracy. This may take 30-90 minutes.

Here are some sample questions:

_____ How did learning a new LMS, Moodle, affect faculty work-loads (i.e. how much time did it take the faculty member to learn the new LMS)?

_____ Does faculty feel that Moodle meets their instructional needs when teaching distance learning courses?

Voluntary Nature of the Study:

This pilot study is voluntary. Everyone will respect your decision of whether or not you choose to be in the study. No one at _____ will treat you differently if you decide not to be in the study. If you decline or discontinue participation with the study, this will not negatively impact the participant's relationship with the researcher or the school. If you decide to join the study now, you can still change your mind during or after the study. You may stop at any time.

Risks and Benefits of Being in the Study:

Being in this type of study involves some risk of the minor discomforts that can be encountered in daily life, such as fatigue or stress. Being in this study would not pose risk to your safety or wellbeing.

The benefits of this study are that administrators and instructional designers will understand how to support faculty in the LMS migration process. Faculty will understand the effects of an LMS migration. Administrators will understand the workload impacts to faculty and perceived needs of faculty.

Payment:

There are no payments or financial rewards for participating in this study.

Privacy:

Any information you provide will be kept confidential. The researcher will not use your personal information for any purposes outside of this research project. Also, the researcher will not include your name or anything else that could identify you in the study reports. Data will be kept secure by online storage protected via a password. Backup of the data will be stored in the researcher's personal safe. Data will be kept for a period of at least 5 years, as required by the university.

Contacts and Questions:

You may ask any questions you have now. Or if you have questions later, you may contact the researcher via phone at _____ or via email at karla.jones@waldenu.edu. If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Walden University representative who can discuss this with you. Her phone number is 1-800-925-3368, extension 3121210. Walden University's approval number for this study is _____.

The researcher will give you a copy of this form to keep.

Statement of Consent:

I have read the above information and I feel I understand the study well enough to make a decision about my involvement. By replying to the email this form was attached to with the words "I consent" in email to karla.jones@waldenu.edu I understand that I am agreeing to the terms described above.