OUT WITH THE OLD AND IN WITH THE NEW: A CASE STUDY ABOUT FACULTY

EXPERIENCES DUE TO A TECHNOLOGY ADOPTION OF A NEW LEARNING

MANAGEMENT SYSTEM

by

MARICE KELLY JACKSON

(Under the Direction of Juanita Johnson-Bailey)

ABSTRACT

Faculty members play a valuable role in the reputation of higher education institutions and the academic success of adult learners. It is imperative for faculty members to be adept with using the institution's learning management system to maintain their instructional materials and teach using a technological system. Consequentially, higher education institutions are frequently upgrading or transitioning to a new learning management system to keep pace with technology and to rival other institutions. Unfortunately, in some instances, when a new learning management system is adopted, the institution's training practices for faculty members are neglected, and they are insufficiently prepared to operate the new learning management system.

The purpose of this study was to examine the learning experiences of faculty at a state technical college who were required to participate in a new technology adoption of the Blackboard Learning Management System. Two research questions guided this study were: (1) What were the common learning experiences of faculty participating in the adoption of a new learning management system? and (2) How did the participating faculty navigate the requirement

to learn or adapt to a new system? This qualitative case study consisted of eight participants: three full-time faculty members and five adjunct faculty members from different schools within a state technical college. The age range of participants was from 36 to 55, and all of the participants were women. The data corpus consisted of semi-structured interviews, document reviews, and observational memos.

Four themes emerged from this study where participants perceived that: (a) Training occurred without stakeholders input, (b) Training was informative and burdensome to participants, (c) Participants underutilized training sessions, and (d) Participants designed their own learning experiences. There were also two conclusions drawn from this study: (1) The common learning experiences of the group were frustrating and did not sufficiently fulfill the needs of the participants and (2) Faculty navigated the requirement to learn a new system by using their prior knowledge as educators to create a process of self-directed, collaborative learning approaches, and looked beyond the management system that was assigned to examine similar systems that more directly served their needs.

INDEX WORDS: Adult Education; Formal and Informal Learning; Diffusion of Innovation; Higher Education Faculty; Learning Management System; Online Learning, Situated Cognition; Technology Adoption

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DEDICATION

This dissertation is dedicated to my family and friends that supported and encouraged me to persevere through the challenging times of the dissertation process.

To my son T.J. for your love, humor, and understanding when you were born, you changed my life for the better.

To my mother Ella, the strongest woman I have ever known. You were a divorced mom of three and provided better than two parents in a home. You are my Shero!

To my sister Carol, the second strongest woman I have ever known.

To my brother Richard, the first male figure in my life that showed me chivalry. You are the strongest man I have ever known.

To my father James (1938 – 2017), who emphasized the importance of common sense thinking in making life decisions, Thank you!

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CHAPTER 1

INTRODUCTION

The development of the Internet has transformed the practice and method of delivery for distance education. The practice of distance education allows adults who cannot sit in a traditional classroom an opportunity to earn a certificate, degree, diploma, or to merely obtain knowledge for self-fulfillment purposes (Simonson, Smaldino, Albright, & Zuacek, 2006). In the 21st century, distance education is now known by other names such as computer-based training, electronic learning, online learning, and web-based learning (Garrison & Anderson, 2003). For this dissertation, online learning is the selected name used for this scholarly discourse. Researchers have stated that online learning has supported the traditional classroom approach to learning and enhanced the delivery method of distance education (Garrison & Anderson, 2003). Online learning has been a useful educational channel that offers flexibility and convenience for adults that want to learn and also offers endless opportunities for innovative teaching by faculty (Islam, Beer, & Slack, 2015).

In higher education, online learning programs have become standard practice and are used as a selling feature by administrators to attract a young, diverse student population and appeal to non-traditional older adults to attend their college or university for their lifelong learning endeavors (Caruth & Caruth, 2013). The demand for online learning courses is a result of people that desire lifelong learning and their aspiration to continue professional and work-related training (Rudestam & Schoenholtz-Read, 2002). Higher education administrators recognize that online learning is not a fad or trend but is a mainstream channel that has changed

how distance education is offered (Allen & Seaman, 2016).   According to Keengwe and Georgina (2011), online learning programs are "a means to broaden enrollment and increase gross margins" (p. 366). Online learning permits an institution to offer courses to learners regardless of place, time, or space. The flexibility of online learning provides an opportunity for people that live busy lives and for those that do not live near the college or university where they want to attend (Community College Resource Center, 2013).

Online learning has not only reformed the landscape of distance education; it has globally impacted how people learn through higher education institutions (Kentnor, 2015). According to Allen and Seaman (2016), 2.85 million learners take all of their educational courses through online learning programs, and 2.97 million take blended courses (e.g., online learning classes and traditional face-to-face classes). To accommodate the increases in demand to offer online courses, higher education administrators need to invest into two important elements for online learning programs (1) a top-notch learning management system (LMS) for their infrastructure and (2) faculty that are technically competent to use an LMS to instruct and manage their online classrooms (Rudestam & Schoenholtz-Read, 2002).

An LMS is "a web-based software application that is designed to handle learning content, learner interaction, assessment tools and reports of learning progress, and learner activities" (Kasim & Khalid, 2016, p. 55). There are various names for an LMS such as course management system, virtual learning environments, and e-learning courseware (Kats, 2010). Green (2002) reported three-quarters of all higher education institutions in the United States use an LMS. Monett and Elkina (2015) stated, the electronic educational technology platform or LMS has now become an expected criterion for colleges and universities to offer online classes. Higher education administrators have recognized online learning as part of their overall strategic plans

and that selecting a top-notch LMS are essential to the success of those plans (Allen & Seaman, 2016).

An LMS will contain learning content that adult learners view and utilize through various learning tools via "web browsers using any operating system, computer or mobile devices" (Kasim & Khalid, 2016, p. 55). Faculty will utilize an LMS to upload instructions, articles, links to websites, and to communicate with their students. An LMS allows students to view tutorials on how to use the system, download instructions for assignments, upload assignments, view videos, work in groups, connect to links suggested by their instructor or classmates, view their grades, take exams and quizzes, email classmates, and their instructor. An LMS can supplement a face-to-face class when the instructor cannot facilitate the class at its scheduled time or be a hybrid class that meets face-to-face and online.

In higher education, the prominently used LMSs are ATutor, Blackboard, SuccessFactors (Kasim & Khalid, 2016), Desire2Learn, Moodle, and WebCT (Kats, 2010). As technology advances, instructional designers in the information and communication technology field constantly develop new tools for the delivery of online learning (Kasim & Khalid, 2016). Information and communication technology (ICT) companies are involved in the creation of software and hardware for online educational programs (Kasim & Khalid, 2016). ICT companies are always pursuing advances to give them an advantage over other software providers to "gain profit and establish their company brand name" (Islam et al., 2015, p. 103). ICT companies make software and hardware upgrades to their applications and require the higher education institutions that use their products and services to make adjustments, which puts unwanted pressure on faculty and staff to learn those adjustments, at times, without prior notifications (Islam, Beer, & Slack, 2015).

Faculty and students are the primary users of an LMS and their adaptation to the new system is critical to its success (Wang & Wang, 2009). Researchers have found that faculty members experience frustrations with the constant change of technology, especially during the implementation process when they need technical support in conjunction with instructional support (Ge, Lubin, & Zhang, 2010). Seaman's (2009) study indicated higher education administrators need to do a better job in understanding faculty members' concerns to do with learning to manage their online classrooms and engage faculty members with long-term strategies for the online learning programs. The constant evolution of an LMS has lead researchers to investigate institutions' implementation processes and faculty experiences (Ge et al., 2010). Faculty's perception and experiences of a technology adoption for a new LMS will influence their acceptance of it and the degree to which they choose to integrate the new technology into their classrooms (Buabeng-Andoh, 2012; Ge et al., 2010).

Faculty recognize that the teaching process in higher education institutions is through online learning which has changed the traditional education focus from teacher-centered learning to student-centered learning (Gautreau, 2011). Historically, "teachers have been the center figure to deliver lectures, assignments, and guiding discussion in various learning environments" (Barrett, 2014, p. 102). Teachers would be in full control of all learning activities and the classroom (Barrett, 2014). The present-day learning process for traditional and online learning has changed the focus to student-centered learning where students can direct their learning pursuits. Teacher-centered learning has not been eliminated but minimized to encourage students' communication skills, develop collaborative learning skills, and to allow students to control their learning through independent study (Barrett, 2014). It is imperative for faculty to learn how to operate an LMS to ensure they present instructional material that is comprehensible

through the student-centered learning approach (Buabeng-Andoh, 2012; Gautreau, 2011). Faculty members have to change their instructional approach for student-centered learning which compels them to know how to incorporate basic multimedia features that consist of animations, audio recording, images, music, video, text, and interactive content in their classrooms. Therefore, the faculty's perception of a new LMS will have a major impact on how faculty gain knowledge about the system.

According to Selim (2007), the faculty's positive and negative experiences with a previous LMS influences their confidence level in learning a new system. The inquiry into why faculty adjust their pedagogy practices due to the technology adoption of an LMS is crucial to understand because it helps administrators and other key individuals determine "the type of training and support used during the migration and what additional training and support are needed" (Rucker and Downey, 2016, p. 2). Baylen, Hancock, Mullen, and Coleman (2010) stated, "there are few articles that discuss issues specific to the transition from one LMS to another, but considerable literature can be found regarding the availability and use of LMSs in institutions of higher education" (p. 106).

The literature shows that an LMS is a key component in the foundation for higher education institutions online learning programs (Allen & Seaman, 2016; Archer & Garrison, 2010; Cavus, 2015; Morrison, 2003). Cavus (2015) expressed that higher education administrators are "seeking to provide the maximum level of education with a minimum level of investment" (p. 1) by way of online educational programs using an LMS. Allen and Seaman (2016) reported student enrollment for online classes was up by 7% since 2014 and higher education administrators want the most relevant information about LMSs to stay abreast of the latest innovations in that field. Although much has been written about online teaching and

learning in general (Baylen *et al.,* 2010; Buabeng-Andoh, 2012; Hewett & Powers. 2007; Ge et al., 2010; Varnell, 2016), there is little known about faculty's formal and informal learning experiences during and after an institution's technology adoption to a new LMS.   Jones (2015) noted that faculty might experience problems during the transition with their job duties while using the old LMS and learning the new LMS. The pressure for faculty to attend training sessions to obtain knowledge about the new system in conjunction with their current job duties can be hectic and exciting (Ge et al., 2010). Ge et al. (2010) stated that administrators expect faculty to experiment with using a new LMS on their time. For that reason, it is significant to investigate the formal and informal learning experiences faculty encounter in learning to operate a new LMS.

The constructivist paradigm is the perspective I used to investigate faculty learning experiences. The constructivist approach focuses on the "key role played by the environment and the interaction between learners" (Schcolnik, Kol, & Abarbanel, 2006, p. 13). More specifically, the formal and informal learning theory aligned with the situated cognition theory will be used to examine how faculty construct meaning through the challenges they face before, during and after the technology adoption to a new LMS. Formal and informal learning practices are common in colleges and universities (Mocker & Spear, 1982) when modern technology has been introduced to faculty, administrators, and students. Researchers have considered formal learning as the first step to lifelong learning for adults (Cross, 2007; Mocker and Spear, 1982). Non-formal learning is structured learning that is for personal development that does not lead to any form of certification (Radaković & Antonijević, 2013). According to Cross (2007), "informal learning occurs in learnscapes" (p. 40) that is defined as "a learning ecology" (p. 40). Learnscapes may be the workplace or informal settings such as a social activity, perusing the internet, and leisure

events. Learnscapes are unlimited and are different (Cross, 2007). The formal and informal learning approach will examine the underpinnings of the faculty's predictable and unpredictable learning experiences.

The situated cognition theory aims to explain how a novice learner gradually moves into being an expert because of the relationship between the learner and the environment (Jenlink & Austin, 2013).   According to Merriam and Bierema (2014), "learning is situation specific" (p. 37). The approach to learning can be achieved through physical and psychological resource tools shared by individuals in the environment (Merriam & Bierema, 2014). In other words, situated cognition focuses on *how* learning takes place not just *where* it is learned (Szymanski & Morrell, 2009). The theoretical frameworks: experiential learning, situated cognition, diffusion of innovation, formal and informal learning are suitable to investigate how faculty members make meaning of their experiences when training on how to operate and manage their instructional materials using a new LMS.

Statement of the Problem

The delivery of distance education to adult learners has progressed because of the Internet. The delivery method of distance education changed due to new LMSs, and the name changed to online learning which has affected the pedagogy of the lifelong learning process. As the convenience and flexibility of educational learning have been transformed, the student enrollment demand in higher education institutions has increased. The increase in enrollment has caused higher education institutions to change their technology to top-notch new LMSs to accommodate the demand. Moreover, the frequent change in LMSs has become common in higher education institutions and a hassle for faculty to learn a new system before it is launched to students. Once a higher education institution has decided to adopt a new LMS, there are

challenges that faculty may encounter before, during, and especially after the technology adoption.

Faculty members have to learn how to transfer course materials from one LMS to the other, maintain their existing job duties, and their need for technical and instructional support (Gautreau, 2011; Ge et al., 2010). The literature provides research that has examined the adult learners' perspectives for learning a new system, the impact a new LMS has affected an institution, and the most used LMSs for higher education institutions. Therefore, to add to the literature from the faculty's viewpoint, this study aimed to investigate how faculty members make meaning of their experiences in formal and informal learning processes from the technology adoption of a new LMS.

Purpose of the Study

The purpose of this study was to examine the learning experiences of faculty at a state technical college who were required to participate in a new technology adoption of the Blackboard Learning Management System (LMS). Two research questions guided this study:

1. What were the common learning experiences of faculty participating in the adoption of a new learning management system?

2. How did the participating faculty navigate the requirement to learn or adapt to a new system?

Significance of the Study

This study is significant because the faculty's experiences during a transition to a new LMS are seldom studied, even though faculty play a pivotal role in the delivery of online education. Faculty's technical and instructional competencies are significant skill-sets that will have a significant impact on the implementation and transition process. Faculty's inability to

operate and manage an LMS can affect their confidence levels to facilitate their classes and, ultimately, affect the success and the retention of students. As higher education administrators strive to use cutting-edge technology for their online LMSs, faculty will learn the new system through scheduled formal learning meetings and by informal learning situations.

The study will add to the literature on how the formal and informal learning theory affects the learning process at the faculty level. Students who take online classes expect faculty to know how to operate the LMS to help them navigate through the classroom features and materials. Faculty may acquire knowledge through a formal learning process when a facilitator guides and evaluates the learning objectives of the faculty (Barrett, 2014). Faculty can also acquire knowledge through an informal learning process where faculty decides to self-direct their learning by working with a mentor or independently. Thus, this study will add to the literature about the construct of the faculty's formal and informal learning experiences that impacts an LMS's implementation process.

Secondly, this study will contribute to the understanding of how participants describe their perceptions of the social environments that have influenced their learning. The social environment has an influence on the learner and that influence can either cultivate or ruin the learning process. The situated cognition theory adjoins with the formal and informal learning theory to investigate how faculty make meaning of their learning through a specific environment. Therefore, this study will shed light on how the social environment propels faculty to learn.

Thirdly, this study will speak to instructional designers that develop curriculum for online, hybrid, and traditional educational programs for an LMS. These instructional designers create the basic universal design that faculty, students, administrators, and staff use to manage student activity, maintain student records, and provide content for the facilitation of courses

(Morrison, 2003). Gronneberg and Johnston (2015) explained universal design as a "holistic approach to learning in which curriculum, procurement, the LMS, and university policy work together to support the needs of all learners" (p. 1). From this study, instructional designers will gain knowledge about faculty concerns and technical challenges, so they are in a better position to develop new institution and instructional strategies that improve future LMS transitions.

Lastly, this study will inform higher education administrators' private and public leaders to understand better the barriers that faculty encounter and what support systems should or should not continue during the transition of an LMS. Research has shown that identifying barriers and supportive measures that affect faculty are needed to understand their concerns that will help them learn and effectively use a new LMS (Beatty & Ulasewicz, 2006). If leaders have ahead of time knowledge of various barriers, they can take preventive measures to minimize the adverse impact on faculty's learning experiences. In the same vein, if leaders know what support systems are advantageous for faculty, they can maximize those methods to increase the chances of a successful transition. Ultimately, this study will contribute to the adult education field and the human resource development field with information that will help circumvent problems and strengthen supportive measures for stakeholders impacted by a transition of an LMS.

<p align="center">**Definition of Terms**</p>

The following definitions listed below are essential terms to this study.

<u>Adult Learning</u>

Adult learning occurs in any location and time where adults will gain new knowledge (Merriam & Bierema, 2014). Learning may happen in formal settings and within informal situations. There are no specific criteria for when and where learning will happen.

Blackboard Learning Management System

A specific infrastructure system where instructors create a learning environment that will include student discussion boards, blogs, groups, and links to external education information. Faculty use it to upload instructional materials such as syllabus, calendar, assignments, and to facilitate their online classroom. Faculty also use it to communicate with their students. Administrators may use it as a communication tool to inform the student population of campus activities, announcements, and events.

Collaborative Learning

A situation or environment where two or more people gather to learn or attempt to learn something together (Dillenbourg, 1999).

Faculty

A group of people that teach at a college, university, or in a department. Faculty consists of full-time instructors, part-time instructors, and adjunct instructors.

Formal Learning

"The transfer of explicit knowledge from instructor to learner" (Boileau, 2017, p. 3) People learn through planned activities in a typical educational environment, online classroom, training center, or in the workplace.

For-Profit Institution

A private higher education institution that is in business to make money for the owners and shareholders. For-profit institutions are also known as proprietary schools.

Hybrid Course

A course that partly meets face-to-face in a typical classroom environment and in a virtual classroom (Caruth & Caruth, 2013).

Informal Learning

Learning that is predominantly experiential and non-institutional (Marsick & Watkins, 1990, p. 7). Informal learning is also considered incidental learning, non-formal learning, and self-directed learning (Cross, 2007; Hager & Halliday, 2006)

Learning Management System

A web-based software application that is intended to store student assessment tools, learning content, handle learner interaction, and produce reports for administrators and faculty about students' progress (Kasim & Khalid, 2016) may also be used for asynchronous and synchronous learning.

Not-For-Profit Institution

A private and public higher education institution that was created to serve the interest of students' career advancements, the community, and local businesses successes.

Online Learning

A process where learners of all ages can learn through asynchronous and/or synchronous computer systems where the instructor provides a designated curriculum for learners to follow. Online learning programs can be offered through primary education, secondary education, postsecondary education, and private businesses for credit and non-credit hours.

Online Course

A student will connect to a virtual classroom to learn.

Transition

A process or movement that moves from one stage to another.

CHAPTER 2

REVIEW OF THE LITERATURE

The purpose of this study was to examine the learning experiences of faculty at a state technical college who were required to participate in a new technology adoption of the Blackboard Learning Management System (LMS). Two research questions guided this study:

1. What were the common learning experiences of faculty participating in the adoption of a new learning management system?

2. How did the participating faculty navigate the requirement to learn or adapt to a new system?

This literature review will include three main sections that are significant to this study. The first section will review the history of correspondence education, distance education, and online learning. The second section will review learning management systems (LMS), the barriers and supports faculty encounter when learning how to operate an LMS and for-profit and not-for-profit higher education institutions that use LMSs as their infrastructure to operate online learning programs. The third section will review the theoretical frameworks that are significant to this study: formal, non-formal, and informal learning, experiential learning, situated cognition, technology adoption, and diffusion of innovation.

Correspondence Education

The initial concept of correspondence education originated in Europe during the mid-1800s. The first documented advertisement for correspondence education was in 1833 by a Swedish newspaper that advertised an opportunity to learn "composition through the medium of

the post" (Simonson et al., 2006, p. 36). The most notable correspondence education course was in 1894 by Sir Isaac Pittman in Europe (Archer & Garrison, 2010). Pittman developed the shorthand system for the English language and decided to teach people that skill through written materials delivered by the British postal system (Holmberg, 1967). Pittman's idea of nontraditional teaching was a different approach for people to learn because the teacher and student were not in the same place and the learning materials were communicated through a nontraditional way (Garrison, 1989). According to Holmberg (1967), correspondence study is to teach through writing when the student and teacher are at a distance from each other, and they communicate through "writing, taped recordings, or telephone contact" (p. 9). Correspondence course materials consisted of textbook assignments that were mailed to the student in sections (Holmberg, 1967) and the answers were mailed back to the instructor.

An important milestone for correspondence education in the United States was in 1874 when the Chautauqua Lake Sunday School Assembly in New York State created a four-year correspondence program for Sunday school teachers (Erdman & Ogden, 2000). In 1892, under the leadership of William Rainey Harper, one of the pioneers of junior colleges (Garrison, 1989) created a formal correspondence education program at the University of Chicago (Garrison, 1989). The most significant development period for correspondence education programs was in the United States between the years 1910 - 1930 due to poor socioeconomic conditions and post-World War I and II recovery periods (Garrison, 1989). According to Wedemeyer (1981), after World War I and II there was an increase of adults taking correspondence courses from various higher education institutions and organizations.

Young (1984) stated, by 1910 there were over 200 schools and organizations that offered correspondence educational programs in the United States. Adults converged on correspondence

education programs to learn a skill because of their circumstances such as illness, transportation, rural location, and civic duties. Admission requirements for correspondence courses were easy for "students that showed evidence of serious purpose" (Klein, 1920, p. 14). Correspondence education programs provided an opportunity for people to learn a skill to improve their financial condition and livelihood (Garrison, 1989). The literature indicated correspondence education used asynchronous learning where the student was not required to be at the same location as the lecturer to learn (Archer & Garrison, 2010).

The tuition cost for a correspondence course varied due to the institution and length of the program (Proffitt, 1928). Courses were offered in various languages such as English, Spanish, and Portuguese (Proffitt, 1928). Various vocational schools, business schools, and traditional universities offered correspondence courses such as hotel and tearoom management, automotive, civil, electrical, and mechanical engineering, business, law, and general writing (Proffitt, 1928). In the beginning, the main target group for correspondence education programs was for adults; however, correspondence education programs soon were used in secondary education curriculum to help high school students (Simonson et al., 2006).

Advantages and Disadvantages of Correspondence Study

There were advantages and disadvantages to correspondence education. The advantages consisted of adults not having to commute to an institution, the process of learning was individually self-paced, cost-effective, and easy access to course materials because of mass production (Garrison, 1989). The disadvantages consisted of limited and slow communication between learner and instructor, ambiguous interpersonal communication, course materials were general and not individualized (Garrison, 1989), isolation of learner, and the quality of the instructional material varied depending on instructor and institution (Archer & Garrison, 2010).

Garrison (1989) noted that the first 150 years of correspondence education had a high student dropout rate due to various reasons such as health problems, change in employment, and self-discipline, which are some of the same reasons affecting adult learners now. In addition, some scholars criticized correspondence education programs for not offering quality education (Archer & Garrison, 2010). The criticism of correspondence education programs lead to the closing of some programs and for those that remained open were reorganized to implement a new system of quality standards (Archer & Garrison, 2010).

During the 20th Century in North America, the delivery method of correspondence education instructional materials changed to embrace new electronic communication methods such as radio and television (Garrison, 1989). The invention of the radio and television offered university administrators more ways to offer correspondence programs (Archer & Garrison, 2010). In the 1950s, Western Reserve University was the first university to offer credited courses through broadcast television (Simonson et al., 2006). In 1966, the United States government enacted a law that offered military veterans educational benefits (National Home Study Council, 1972).

In 1972, National Home Study Council conducted a quantitative study to investigate if veterans and active service persons used their benefits at correspondence schools, did they complete the programs, and were they able to find employment after completing their specific programs (National Home Study Council, 1972). The findings showed three of four veterans and active service persons did not complete their correspondence courses because they did not understand the material, had a loss of interest and incurred an additional financial cost for not completing the program (National Home Study Council, 1972). The respondents indicated that the VA needed to provide counsel prior to the veteran or active service person entering into a

correspondence educational program (National Home Study Council, 1972). The United States federal government utilized correspondence programs as a supplement to traditional education programs that helped military service persons develop skills to find employment. Correspondence education programs in the late 19th and early 20th centuries addressed the need that was lacking in traditional education programs which were an alternative option for adult learners to learn. The invention of technology and its impact on correspondence education programs prompted higher educational institutions and private learning organizations to restructure their correspondence education programs to a more relevant practice that became known as distance education.

Distance Education

The origin of distance education developed from the economic changes by the industrial revolution and refinement of the practice in correspondence education (Holmberg, 2005; Keegan, 1990, 1993, 1995; Lever-Duffy, 1993; Peters 2002). Distance education has been explained by scholars to have developed across three generations (Archer & Garrison, 2010). The first generation was correspondence education from the early 20th century, the second was distance education in the late 20th century, and the third generation is online learning in the late 20th century and 21st century (Archer & Garrison, 2010). Distance education was a method where the lecturer and adult learners would interact with each other in real-time that used technology such as audio conferencing, video conferencing, and the telephone to communicate. Adult learners received their course materials through different resource tools such as the postal service and selected study centers (Peters, 2002). The concept of distance education gained popularity with adult learners because of its convenient method and low tuition cost that allowed adult learners more opportunities than correspondence education to learn (Garrison, 1989).

Distance education was a two-way form of communication (Garrison, 1989). Faculty developed the lesson plans for adult learners and used occasional seminars, telephone contact, and teleconferencing to communicate with them. Moore and FernUniversitat (1983) indicated the concept of distance education was a "meeting of the minds" (p. 4) between the student and teacher that fostered self-directed learning. Scholars have noted that learning through distance education entailed some levels of self-directed learning by the student (Bernath, Szucs, Tait, & Vidal, 2009; Caruth & Caruth, 2013; Garrison, 1997; Mocker & Spear, 1982; Moore & FernUniversitat, 1983). Self-directed learning is when the student assumes the responsibility for the information to be learned (Hansman & Mott, 2010). Merriam (2001) described self-directed learning through three perspectives: humanistic, transformational, and emancipatory. Humanistic is when the learner seeks to learn for self-fulfillment, transformational is through self-reflection from making meaning through their experiences, and emancipatory is when the objective of learning is for social and political action by the learner (Merriam, 2001). Those three perspectives by learners are what contributed to the growth of distance education programs from the mid-1970s to the late 1990s (Hansman & Mott, 2010) and in the 21st century.

The demand for distance education programs impelled governments around the world to increase funding at universities to offer more classes (Garrison, 1989). Lever (1993) stated, "Distance learning is one of the very few alternative models to classroom-based instruction that has the potential to increase productivity – to provide more learning for more students without increasing the number of faculty, staff, and administrators" (p. 8). In the 1980s, the United States federal government deregulated the telecommunication industry which helped with the growth of distance education programs (Peters, 2002). Higher education institutions partnered with telecommunication companies to increase their usage of audio and video teleconferencing

technology in their distance education programs (Peters, 2002). Fiber-optic communication systems were the source used to facilitate two-way communication between student and lecturer (Simonson et al., 2006). The average age for a student that enrolled in a distance education program was between 25 – 35 during the 1980s and late 1990s (Holmberg, 1980). The literature also revealed the advantages and disadvantages to distance education programs.

Advantages and Disadvantages of Distance Education Programs

The advantages of distance education programs were that colleges and other educational organizations had an opportunity to offer more job training options to a larger scale of people, instructors had the convenience to teach a class at one location and broadcast the lecture to another location, organizations were able to lend their equipment to other organizations, and learners were able to work on real-time problems for their jobs and personal issues (Keegan, 1995). The disadvantages consisted of learners not having transportation to a facility to gain access to an interactive video or a cable broadcast, learners not having the financial means to purchase specific educational kits to use the audio and video equipment, and lack of technical support (Lever, 1993).

The literature also revealed the criticism from scholars about the quality of the content and delivered methods in some distance education programs (Archer & Garrison, 2010; Berg, 2002, Knapper, 1985; Simonson et al., 2006). Higher education administrators were faced with proving their distance education programs delivered the same standard of quality as their traditional education programs (Knapper, 1985). According to Knapper (1985), administrators aimed to replicate as much as possible from traditional course curriculums to use in distance educational curriculum. Clark (1983) indicated the various methods used to deliver distance education materials had no significant effect on students learning. Clark (1983) stated, "The

instructional method is what fosters learning" (p. 449). Clark (1983) believed any form of media used to were supplements to the lecturer's curriculum. Over the years, scholars have refuted the assertions that distance education programs were substandard to traditional educational programs and the media used to deliver course material do influence student learning (Alexander & Golja, 2007; Bates, 1990; Erdman & Ogden, 2000; and Garrison, 1989)

Information Technology in Distance Education

Research has shown the development of information technology had a major impact on distance education (Ertmer & Ottenbreit-Leftwich, 2010; Garrison & Anderson, 2003; (Simonson et al., 2006). According to Archer and Garrison (2010) distance education consisted of electronic transmission of facilitators'and learners' interaction through a central server where either party could access the materials at any time. Information technology helped distance education programs reach a larger student population (Lever-Duffy, 1993). According to Lever-Duffy (1993), the usage of information technology in "distance education required educators to approach the individualization and organization of curriculum creatively, but the content identified by the professional as worth teaching remains unaltered" (p. 2). Distance education programs used synchronous learning, which was similar to traditional classroom learning where the student and teacher meet at the same time (Archer & Garrison, 2010).   Synchronous learning presented, at times, a problem when adult learners and teachers were in different time zones and had to meet at a specific time (Simonson et al., 2006).

As technology advanced in the mid-1990s to develop the World Wide Web, distance education shifted back to asynchronous learning that allowed adult learners to access instructional materials at their convenience as well as continue with synchronous learning (Garrison & Anderson, 2003). Computers, interactive video, satellite links, and software

applications were able to deliver instruction to adult learners where the traditional lecturer and classroom could not reach (Simonson et al., 2006). Thus, distance education programs begin to expand classroom learning using mainframe computers and microcomputers linked via the Internet (Archer & Garrison, 2010) that transformed distance education to online education.

Online Learning

The development of the Internet changed the name, method, and practice of distance education (Rudestam & Schoenholtz-Read, 2002). The named distance education has evolved to different names such as electronic learning (E-Learning), distance learning, and blended learning (Islam, Beer, & Slack, 2015). For classification purposes, online learning will be the preferred word used in this paper. The theory of online learning has generated a substantial level of attention in the higher education field (Kasworm, Rose, & Ross-Gordon, 2010). Allen and Seaman (2016) noted in fall 2014 that 2.85 million learners in the United States public and private college took all of their classes online, and 2.97 million learners took a mixture of both online and face-to-face classes. The highest number of learners taking online classes were undergraduate learners at public colleges and universities (Allen & Seaman, 2016).   The number of adult learners not taking any online learning courses has moderately declined from 2012 - 2013 to 434,236 and further declined from 2013 - 2014 to 390,815 (Allen & Seaman, 2016).

Numerous scholars define and explain online learning differently. Askov, Johnston, Petty, and Young (2003) explained online learning as "education in which all or part is built on resources available on the Internet" (p. 2). Morrison (2003) defined online learning as:

The continuous assimilation of knowledge and skills by adults stimulated by synchronous and asynchronous learning events — and sometimes Knowledge Management outputs—

which are authored, delivered, engaged with, supported, and administered using Internet

technologies. (p. 4)

Different explanations and definitions describe online learning because various technology

applications used in online learning are used differently in different professions (McIntosh,

2016). For example, custom content developers will perceive online learning differently than

generic content publishers (Morrison, 2003) and some private corporations may use their online

educational technology only as a repository for their staff to access old and new policies and

procedures. An essential use of technology in higher education since the development of the

Internet is to make improvements and adjustments to the traditional method of delivery for

learning (Garrison & Anderson, 2003).

The type of technology used in online learning has prompted administrators to make

modifications in how they manage operations and for faculty to make changes to their

instructional methods (Monett & Elkina, 2015). Peters' (2002) review of the literature indicated

higher education administrators believed the use of technology would help them react more

quickly to institutional matters, community concerns, and student affairs. McCathy and Samors'

(2009) quantitative study with higher education leaders found administrators acknowledged

online learning programs need to be included in the overall institution's strategic goals, to ensure

reliable financing is obtained for sustainability and growth, and online educational programs can

change campus culture if campus leaders create a persuasive buy-in. Johnson-Bailey (2016)

expressed a benefit of online educational programs "is the ability to handle an increase in student

enrollment when budget constraints prevent the addition of more classrooms" (p. 50). Online

learning programs have caused higher education institution stakeholders to adjust to new

learning environments as well as teaching practices.

Faculty teaching practices have adopted new approaches and strategies through traditional teaching methods in andragogy because of online learning. A new approach in the 21st century is the dissemination process of instructional materials through asynchronous communication channels (Er, Özden, & Arifoğlu, 2009). Online learning allows faculty more asynchronous communication options to disseminate course assignments, course information, and administer formative and summative assessments to students. For example, a professor can upload their course materials from a remote location to their online learning classroom and certain course materials to their website that will have a folder that may or may not be password protected if the institution allows that type of access for students. Faculty can distribute those course materials immediately through communication channels such as email, google docs, personal websites, and social media platforms (i.e., instagram and twitter) that did not exist during the correspondence and distance education eras.

A second new approach is through synchronous communication where faculty can have immediate real-time face-to-face communication (Er et al., 2009) with students through mobile device applications that use video chat applications such as facetime, google duo, and telegram. Faculty can also use video conferencing software such as adobe connect, gotomeeting, skype, ooVoo, and zoom to communicate with students (Dyer, 2019). For instance, a professor can conduct a class from a remote location through video conferencing software by providing students with a link to access the classroom. Synchronous communication has been part of the distance education era and has changed because of advancements with technology that affect online learning. Lastly, a new online strategy for faculty teaching practice is the use of online digital assessment tools for online and face-to-face classrooms (Makarova & Makarova, 2018). Faculty use online digital assessment tools for formative assessments and collaborative learning

(Maksimović & Dimić, 2016). Numerous digital tools such as classpulse, dotstroming, kahoot, padlet, and plickers (Dyer, 2019) can be implemented through asynchronous and synchronous communication with students. For example, I use padlet in my online and face-to-face classrooms to engage students with the lesson to determine their level of understanding and I use classpulse for collaborative learning. Online digital assessments tools help professors gauge student learning and allow students to do a self-reflection of their learning process.

Moreover, human resource trainers for workplace learning can use these new faculty teaching practices for online learning. For instance, a human resource trainer can conduct a system-wide formal training session where the training materials can be distributed through company email and the training session can be facilitated via a synchronous communication channel such as adobe connect to conduct a real-time training session. The human resource trainer can also use any form of an online digital assessment tool to evaluate the learning of the participants. According to Le Clus (2011) "learning new skills and knowledge makes it possible for co-workers to manage change, perform well and be satisfied with their work" (p. 358). The new faculty teaching practices are global teaching tools that add unique benefits for higher education institutions and organizations.

Online learning in higher education has boost accessibility for adult learners to attend educational programs to earn a degree, certificate, or to improve personal knowledge. The new teaching approaches and strategies give faculty and human resource trainers more innovative tools to cultivate cognitive development in adult learners. The technology used to build the infrastructure for online learning programs is an LMS that faculty has to use to teach and manage their instructional materials. Therefore, it is imperative for faculty to learn how to operate an LMS for them to be proficient with using technology in the classroom.

Learning Management System

An LMS is "a web-based software application that is designed to handle learning content, learner interaction, assessment tools and reports of learning progress, and learner activities" (Kasim & Khalid, 2016, p. 55). There are various names for an LMS such as course management system, virtual learning environments and e-learning courseware (Kats, 2010). In 2002, the Campus Computing Project reported three-quarters of all higher education institutions in the United States use an LMS (Campus Computing Project, 2002). Monett and Elina (2015) stated the electronic educational technology platform or LMS had become an expected criterion for colleges and universities to have to offer online classes. Higher education administrators have recognized that online learning is part of their overall strategic plans and selecting a top-notch LMS is essential to their overall institution success (Allen & Seaman, 2016).

A review of the literature has indicated that an LMS has three main functions for faculty, administrators, and adult learners to use learning skills tools, communication tools, and productivity tools (Kasim & Khalid, 2016; Priyanto, 2009; Wichadee, 2015). Figure 1 offers an illustration of how an LMS works for online learning programs.

Figure 1 Kasim & Khalid's (2016) *Learning Management System Tools*

Note. Cited from Kasim, N. N., & Khalid, F. (2016). Choosing the right learning management system (LMS) for the higher education institution context: A system review. i*JET – Volume 11, Issue 6*, 55 - 61.

In higher education, the prominently used LMSs are ATutor, Blackboard, SuccessFactors (Kasim & Khalid, 2016), Desire2Learn, Moodle, and WebCT (Kats, 2010). As technology advances, instructional designers in the information and communication technology (ICT) field continually develop new tools for the delivery of online learning (Kasim & Khalid, 2016). Faculty and adult learners do get frustrated with the constant change of technology and the need

to provide support to them during the transitional process of a new LMS (Ge et al., 2010). As a result, the rapid adoption of an LMS has lead researchers to investigate institutions' implementation processes and faculty members' experiences (Ge et al., 2010). Faculty members are a vital part of an institution's technology adoption to an LMS. Faculty members' experiences with the pre-training, during the technology adoption, and post-training processes are important components to investigate. Previous research studies have listed barriers that faculty have encountered when preparing for a new LMS.

Barriers

Numerous empirical studies were reviewed (Baylen et al., 2012; Betts & Heatson, 2014; Crews, 2017; Monett and Elkina, 2015; Ertmer and Ottenbreit-Leftwich, 2010; Gautreau, 2011; Ge et al., 2010; Georgina & Olson, 2008; Gregory & Lodge, 2015; Gutman, 2012; Jones, 2015; Leggett and Persichitte, 1998; McCarthy, 2009; Meloy, 2013; Muilenburg & Berge, 2001; Moore, 2007; Reid, 2014; Seaman, 2009; Somekh, 2008; Spelke, 2011; Varnell, 2016; Yancey, 2016) to compile a list of faculty barriers when preparing for a new LMS. According to the literature, the barriers are faculty readiness, faculty compensation and time, legal ownership, faculty technology support, instructional support for online faculty, self-efficacy to learn, and organizational culture and support. In this section of the literature review, I will explain how each barrier can impede the process of a technology adoption of an LMS.

Faculty Readiness

It is imperative for the institution to ensure all faculty members are aware of the timeline for a technology adoption because they need to know when the changes will occur. Faculty readiness consists of the degree that faculty have been prepared to go through an implementation process for some form of change in an institution (McCarthy, 2009). McCarthy (2009) noted

higher education administrators need to communicate with faculty and staff of all new online

learning technology initiatives. Baylen et al. (2012) stated, administrators should focus their

efforts to reduce faculty members' fear of change by keeping them abreast about the timeline of

events for the transitional process. When administrators decide that the current LMS will

change, they should inform all stakeholders of the tentative dates for the transition. Higher

education administrators should be as transparent as possible and include faculty members as

much as possible to help them prepare for the transition (McCarthy, 2009).

Ge et al.'s (2010) study revealed faculty members wanted to be part of the selection

process of a new LMS. There may be faculty members that teach at other institutions and can

bring substantial knowledge and expertise that may be helpful to the technology adoption. If

administrators decide to form a search committee for an LMS, that committee should have at

least one to two faculty members on it. Faculty members' representation on the committee

allows them to believe that their opinions matter (Baylen et al., 2012). Faculty preparedness is a

significant element to the transitional process because faculty would be the most consistent user

of the LMS (Ge et al., 2010).

Faculty Compensation and Time

Muilenburg and Berge (2001) stated, "distance learning courses require a greater time

commitment, so faculty compensation, incentives, and release time are important issues" (p. 17).

Appropriate compensation (extrinsic reward) for the time that faculty use for learning the new

LMS is a factor that administrators need to consider. A new LMS will have different features

than the old LMS. It takes time to learn those features. Faculty members are under a

considerable level of stress in learning the new features combined with their daily work duties

(Muilenburg & Berge, 2001). A study by Jones (2015) revealed faculty members' concerns

about the impact of the daily workload combined with the amount of time needed to be trained on a new LMS brings about trepidation. When new technology is introduced to faculty, their instructional techniques have to be modified due to the new system (Reid, 2014). Therefore, administrators need to ensure compensation for the additional time faculty spends learning the system and building their classrooms (Jones, 2015).

Legal Ownership

Administrators and faculty must consider business matters regarding ownership of intellectual property as it pertains to instructional resource materials, chat-room dialogue, and new theoretical models used and developed in face-to-face and online classes. In 2002, the United States created the Technology Education and Copyright Harmonization Act (TEACH Act) for faculty teaching for accredited institutions with online learning programs (Crews, 2017). According to Crews (2017), the TEACH Act allows faculty members to use "copyright protected materials in distance education-including on websites and by other digital means--without permission from the copyright owner and payment of royalties (para. 1). The TEACH Act mainly focuses on provisions for institutions rather than faculty (Crews, 2017). Institutions generally govern the content of online courses because most institutions are at higher risk for lawsuits than faculty (Crews, 2017).

The American Council on Education directs institutions to develop their intellectual property policy and to ensure all faculty members and staff are aware of it (Meloy, 2013). The American Association of University of Professors (2016) explained, "It has been the prevailing academic practice to treat the faculty member as the copyright owner of works that were created independently and at the faculty member's initiative for traditional academic purposes"(para. 2). In Spelke's (2011) study, a participant (faculty member) expressed concerns about using

"previous students-authored original content in their future online classes" (p. 121). The participant stated the institution created a policy to protect faculty from learners' lawsuits when they would use the previous learners -authored original material. Moore (2007) noted individual intellectual property (IPR) ownership is a more significant issue for online learning than for the traditional classroom as it pertains to who owns the material in the online classroom.

Research has shown that the majority of institutions do not provide ownership rights to materials in an online classroom (McCarthy, 2009). According to Gundogan (2016) regarding online learning, "individual academics, other staff, and students all can be creators and need to be aware of the importance of protecting their individual intellectual property" (p. 92). Reid (2014) noted, faculty members might be hesitant to use their materials in an online classroom because of piracy and copyright infringement. In McCarthy's (2009) study, faculty suggested a prenuptial agreement before the start of a class on who owns the course materials to prevent any problems and hostile feelings between instructors and an institution. Thus, faculty members need to determine if the intellectual property policy will change due to the adoption of a new LMS so the professor can determine what resource materials to use and if special arrangements are to be made with the institution to protect their intellectual property.

Faculty Technology Support

Technology support is another barrier that affects the technology adoption of an LMS. Technology support for faculty is extremely important. Faculty professional development to learn computer technology is crucial to the resource materials that will be provided to learners. Gautreau (2011) stated, online learning "instruction contains advantages that support learner learning; however, faculty development training is necessary to understand the effective techniques (p. 3). Administrators need to ensure there is adequate information technology (IT)

support available for faculty. Seaman's (2009) study suggested for campus leaders develop "multiple approaches to institutional resource allocation include strategies that take into account the difference between resources needed to start a program and resources needed to sustain and grow a program" (p. 24).

Researchers have also indicated that administrators who manage online learning programs should allocate enough resources for technical support (Jones, 2015). Ge et al. (2010) suggested that administrators need to have support at various levels and the various multiple satellite campuses. Many institutions have satellite campuses that will go through the same technology adoption as the main campus and arrangements for appropriate technology support should be at those locations. Technology support during the transition to an LMS is essential to faculty members' confidence to learn the system and to facilitate their online courses.

Instructional Support for Online Faculty

Another barrier that emerged from the literature was the lack of instructional support. According to Reid (2014), faculty may be resistant to change because of fear of not having enough instructional support to learn the new technology.   Instructional support is the assistance given to faculty to help learn and prepare curriculum design for a course, techniques to add multimedia content, and provide classroom management skills (Gutman, 2012). Monett and Elikina (2015) study reported 38.9% of faculty felt they needed assistance during the adoption of new technology and with "content-related issues" (p. 4). Seaman (2009) noted that faculty believed institutions ranked "below average when supplying support and incentives" (p. 3) during a technology adoption. Instructional support can be categorized as group support or individualized support.

Self-Efficacy to Learn

For each faculty member, self-efficacy plays a vital role in how he or she learns an LMS to develop his or her online course. Yancey (2016) defined self-efficacy as "a person's belief that he or she can (or cannot) successfully organize and execute an action to achieve the desired outcome in a particular situation" (para. 1). Faculty members' confidence in using an LMS and trusting the transition process has a direct impact on their teaching ability for their online courses. Leggett and Persichitte (1998) noted, "technology training for teachers must be hands-on, meaningful, systematic, developmental, and on-going" (p. 34) for teachers to feel confident in using the system. Moreover, if a faculty member has had a bad experience with teaching online or an adoption process from another institution, then that person's self-efficacy may be low and will need extra reassurance that they will do well with the new system (Baylen et al., 2012).

A 2016 study by Varnell found that 69% of faculty believed that additional professional development training should be provided for faculty members to learn the system. According to Ertmer and Ottenbreit-Leftwich (2010), evidence shows that "self-efficacy may be *more important* than skills and knowledge among teachers who implement technology in their classrooms" (p. 261). For faculty to have high self-efficacy, higher education administrators will have to invest financially in multiple approaches (i.e., mentors, additional professional development trainers, and training sessions) for faculty to gain the confidence they need to use the technology (Reid, 2014).

Organizational Culture and Support

The culture in a higher education institution will influence the faculty's perception of an LMS transitional process (Gregory & Lodge, 2015). Gregory and Lodge (2015) noted cultural

change would involve all levels in an institution and needs to be a joint and collaborative effort during the implementation process. Research studies have indicated faculty believes professional development trainers need to understand the culture of the organization to tailor their training sessions for each department (Georgina & Olson, 2008). Somekh (2008) pointed out "teachers' beliefs and attitudes and their confidence and competence with technology depend on the inter-locking cultural, social and organizational context in which they live and work" (p. 450).

Support for faculty is another barrier that can hinder the technology adoption process of a new LMS (Varnell, 2016). Varnell's (2016) study showed 54% of faculty did not feel supported by administrators during their institution's transitional process. According to Varnell (2016), support for faculty should be "well organized with an ongoing process of improvement" (p. 5) so that no faculty member will feel alone during the transition. When there is adequate support for faculty, self-efficacy will be higher, and retention of faculty will be minimized (Betts & Heatson, 2014).

Georgina and Olson's (2007) findings revealed faculty did not have departmental support to assist with setting up their online classroom, support services were unfriendly to faculty, support services were not set up for individual training, and there was not enough tech support for night classes. Georgina and Olson's (2007) findings contrast with Baylen et al.'s (2012) study, which showed 80% of faculty did feel supported during the technology adoption of their institution's LMS. The participants stated that administrators ensured instructional designers, multimedia developers, technical support specialists, and instructional technologists supplemented with electronic resource materials helped them learn the new system (Baylen et al., 2012). When a change occurs in an organization, the users will have some degree of

apprehension during the process (Baylen et al., 2012). Support for faculty is a critical service that faculty need as they learn how to integrate the new technology-based tools in their classrooms (Baylen et al., 2012).

Moreover, communication between administrators and faculty is essential to maintain professional relationships. Seaman's (2009) study revealed the advantages of direct and intensive communication with faculty, especially in the early stages of implementing an online learning initiative should be close up and personal. Seaman (2009) also stated leaders should engage in "sustained internal recruitment, marketing, and/or orientation effort that includes extensive face-to-face contact with individual faculty members" (p. 45). Thus, administrators and faculty need to support each other to assist in preventing barriers that would complicate a technology adoption to an LMS. An approach to minimize barriers is through formal and informal learning.

Learning Management Systems in For-Profit and Not-For-Profit Institutions

Higher education institutions in the for-profit and not-for-profit institutions spend hundreds of thousands of dollars to persuade adult learners to attend their schools (Allen & Seaman, 2016; Simonson, Smaldino, Albright, & Zuacek, 2006). The practice of online educational programs is a key factor in attracting adult learners and having an LMS that has the capability of handling large groups synchronously is necessary for the 21st century learner. The current and anticipated enrollment of adult learners in online learning programs dictates how frequent institutions change LMSs (Alexander & Golja, 2007; McCarthy & Samors, 2009. Allen and Seaman (2016) reported that not-for-profit institutions had a higher enrollment of adult learners in their online learning programs than for-profit institutions. Table 1 provides an overview of enrollment in undergraduate and graduate programs of online learning programs for-profit and not-for-profit institutions.

Table 1 Online Learning Enrollments by type of Institution: Fall 2014

Type of institution	Undergraduate		Graduate	
	All distance	Some distance	All distance	Some distance
Public	1,139,020	2,393,864	243,852	130,166
Private Not-for-profit	371,365	237,746	260,976	90,664
Private for-profit	615,255	105,269	228,324	12,325
Total	2,125,640	2,736,879	733,152	233,155

The literature does not provide data on the frequent change of LMSs for-profit and not-for-profit higher institutions. However, the literature does show in the past five years of a regular change of LMSs due to advancements in technology, mergers, and acquisitions of companies (Fifth Annual LMS Data Update, 2017). The literature provides data on the most used company brand for LMSs and the number of enrolled learners per company brand. There are various types of LMSs around the world, and each country has their leading company brands that will have different features and serve a different purpose than the United States higher education system (Fifth Annual LMS Data Update, 2017). Moreover, there are higher education institutions that use more than one LMS due to the type of curriculum in a department (Falvo & Johnson, 2007). In edutechnia's market share analysis published in the Fifth Annual LMS Data Update (2017), the top five leaders for LMSs are Blackboard with 1147 users, Canvas has 841 users, Moodle has 663 users, Desire2Learn (D2L) has 406 users, and Sakai has 99 users. The technical college for this study adopted the Blackboard system which is currently the leading LMS brand.

Formal and Informal Learning Theory

Formal and informal learning occurs in our daily lives. The formal and informal learning theory has been historically associated with the lifelong learning philosophy (Mocker & Spear, 1982). Lifelong learning is defined as the "holistic vision of learning in different contexts (formal, informal, and non-formal) and throughout life, based on the evolution of provider-driven education toward personalized learning and aiming at improving knowledge, skills, and competencies within a personal civic, social and /or employment-related outlook" (Leone, 2014, p. 274). Formal, informal, and informal learning are considered "ranges along a continuum of learning" (Cross, 2007, p. 16) in people's lives. People engage in various types of formal, non-formal, and informal learning activities where they anticipate the learned information will help them function in the world where they live (Hansman & Mott, 2010). Moreover, there are different learning experiences that people encounter when they take part in formal and informal learning. In this section, I will explain the differences and the similarities between the formal and informal theory.

Formal Learning

Formal learning is also known as formal training. Formal learning emphasizes the transfer of explicit knowledge from instructor to learner (Boileau, 2017, p. 3). Adult learners in a formal learning environment "do not have autonomy over the objectives or means of their learning" (Mocker & Spear, 1982, p. 4). A facilitator will control the learning material that will eventually be graded to determine if participants have learned the information (Hager & Halliday, 2006). Traditionally and typically, formal learning occurs at a scheduled time and location where it will take place through different settings such as elementary and secondary schools, colleges and universities, community programs, military training (Mocker & Spear,

1982), workplace training, social programs, and webinars. However, the evolution of the internet has changed the traditional formal learning process to an online learning process where a person can still formally learn anytime and anywhere. According to Cross (2007), formal learning still has top-down directives where the "learners are evaluated and graded on mastering material that someone else deems important" (p. 16).

The traditional formal learning educational setting has changed due to the new digital age of technology in the 21st century. New technology devices (i.e., lab tops, mobile smartphones, smartwatches, tablets, etc.) have impacted the pedagogical process that makes it easier for the traditional classroom learner to gain access to information. Wheeler (2011) indicated that adult learners enjoy using the new devices as well as social media in the classroom to access immediate educational content. Therefore, the formal learning setting is still relevant to the use of new technology tools that can enhance the learning experience.

Informal Learning

The informal learning theory emerged when scholars began to investigate how adults learned through various learning activities (Hansman & Mott, 2010). John Dewey and Eduard Lindeman were scholars that initially studied how adults learn from experience that inspired the informal learning theory (Marsick & Watkins, 1990). Knowles' book, *Informal Adult Education,* provides the structure for the informal learning theory and future scholars to research and expand the theory. Informal learning occurs from planned or unplanned experiential activities through daily activities and workplace learning activities. The informal learning process is just as fundamental to educate and train people as the practice of formal learning. Formal learning is considered the traditional approach to teaching and informal learning "covers all other situations in which people learn" (Hager & Halliday, 2006, p. 30). Cross (2007) noted that both formal and

informal learning plays a role in the process to learn. For some adult learners, informal learning is viewed as a complement to formal learning rather than a replacement of it (Coffield, 2000).

Researchers consider informal learning as an overarching term that includes incidental learning, self-directed learning, and non-formal learning (Cameron & Harrison, 2012; Leone, 2014; Marsick & Watkins, 1990; Mocker & Spear, 1982; Radaković & Antonijević, 2013). Marsick and Watkins (1990) explained informal learning as "predominantly experiential and non-institutional" (p. 7). Adult learners that practice informal learning processes using today's digital technology will open up many opportunities for self-study and global collaboration with other individuals with similar interests (Merriam and Bierema, 2014). Moreover, adult learners that practice informal learning can experience incidental learning during their informal learning activities.

Incidental Learning

Incidental learning is explained as "a by-product of some other activity, such as task accomplishment, interpersonal interaction, sensing the organizational culture, trial-and-error experimentation, or even formal learning" (Marsick & Watkins, 1990, p. 12). In other words, incidental learning is a spontaneous discovery of something new even though a person was performing a different task or interacting with a person and/or people. Incidental learning can occur anywhere and at anytime. According to Kerka (2000), incidental learning commonly happens in the workplace and can increase an employee's self-confidence and interpersonal skills. However, scholars have also noted that incidental learning can be hard to measure because people can learn something new unconsciously and not recognize it until they do a self-reflection of the learning process (Boileau, 2017; Marsick, Watkins, Callahan, & Volpe, 2009; Schugurensky, 2000)

Table 2 illustrates the differences between formal learning, informal learning, and incidental learning. Research has shown that leaders recognize that formal learning will always be necessary, informal learning will occur as people communicate about their knowledge and skill in the workplace, and incidental learning will happen as long as people conduct a critical self-reflection of a process (Chandra & Shah, 1987; Marsick & Volpe, 1999; Radaković & Antonijević, 2013; Schugurensky, 2000).

Table 2. Overview of formal learning, informal learning, and incidental learning

	Formal	**Informal**	**Incidental**
Definition	The transfer of explicit knowledge from an instructor to a learner (Boileau, 2017)	Learning that is predominantly experiential and non-traditional (Marsick & Watkins, 1990, p. 7).	Learning that is unintentional, a byproduct of another activity (Marsick & Watkins, 1990, p.7).
Places for learning	Educational institutions. Continuing education programs.	Daily activities Leisure activities Workplace learning	Daily activities. Leisure activities. Workplace learning.
Methods for learning	Structured programs in terms of purpose and goals.	Unstructured in terms of goals and objectives.	Non-routine setting or situations. Unplanned actions or events.
Learning outcomes	Intentional / Purposeful	May be intentional and unintentional.	Accidental / Unrehearsed
Examples:	An instructor will create lesson plans for a finance course to teach learners that are enrolled in a credited class (face-to-face, hybrid, or strictly online).	A person seeks to learn new finance laws and will initiate the learning process, sets own goals, and learns at one's or group pace.	A person unexpectedly learns a new finance concept while observing a colleague's presentation or interaction with another person.

Informal learning has mostly been researched through workplace learning (Hager & Halliday, 2006). According to Leslie, Aring, and Company brand (2003), 70% of workplace learning is informal. Leslie et al. (2003) expressed that informal learning can be a better teacher

than formal learning because it will allow a person the freedom to explore what he or she has learned. Cross (2007) noted that studies that examined informal learning in the workplace are considered profit strategies for organizational leaders. The results from informal learning in the workplace research studies have informed organizational leaders on how to make product knowledge and company communications more available to employees to reduce stress, absenteeism, encourage innovativeness, and increase professional growth (Cross, 2007).

Within the literature, scholars intentionally distinguish formal and informal learning methods to clarify term names and learning practices that may seem at times contradictory depending on the criteria used by different scholars (Beckett & Hager, 2002; Cameron & Harrison, 2012; Colley, Hodkinson, & Malcom, 2003; Cross, 2007; Eraut, 2000; Mocker & Spear, 1982). For example, Eraut (2000) preferred the term non-formal learning instead of informal learning because he believed the word informal is colloquial and is associated with too many general social variances that do not differentiate the word from formal. Beckett and Hager (2002) restricted their research focus on informal learning only to the workplace.

Becket and Hager (2002) examined informal learning experiences through two approaches to labor: paid work and unpaid work. Paid work consisted of service occupations such as retailing, manufacturing occupations such as trades, management including supervision, and professional and para-professional occupations that consist of volunteer work. Unpaid work consisted of domestic responsibilities in and around the home, institutional involvement such as volunteering as a museum guide, hobbies and similar interests, such as growing roses, and non-institutionalized voluntary work. The context in which Beckett and Hager (2002) used informal learning was conceptualized differently than the general context of informal learning. Their

approach to investigate the informal learning experiences of people through paid and unpaid work clearly shows the flexibility of the informal learning theory.

Moreover, the National Adult Learner Survey (NALS) (2010) conducted a study that examined the practice of formal, non-formal, and informal learning with adults between the age range of 16-24 that were "not in continuous full-time education and adults 25 and over regardless of their current learning status" (p. 15). The NALS (2010) study surveyed adults that participated in at least one formal, non-formal, and informal experience three years before the survey within vocational and non-vocational learning. The NALS (2010) survey used the same questions and eligibility criteria from its 2005 study. The survey had topics that related to different types of adult learning activities, obstacles, and incentives to learning, usage of information communication technologies in activities, media, and various factors that influenced their ability to learn (National Adult Learning Survey, 2010). There were three main categories of learning that were subdivided in the questionnaire: (a) "formal learning was defined as learning that is intended to lead to a nationally recognized qualification, even if the qualification is not achieved, (b) non-formal learning was a course or taught class that did not lead to a nationally recognized qualification, and (c) informal learning was learning that involved self-study to improve knowledge of a subject, not involving taught classes or qualifications" (p. 12). Table 3 describes each learning environment.

Table 3 Learning Environments

Vocational Learning	Non-Vocational Learning
Related to the respondent's job at the time of starting the learning, or Started to help with a future job, or Started to help with voluntary work; or Any course leading to a nationally-recognized qualification	Unrelated to the respondent's job at the time of starting the learning; and Not started to help with a future job; and Not started to help with voluntary work.

Note. Cited from "National Adult Learner Survey," *Catalyst (21519390)*, 40(2), p. 14, (2012).

The data from the NALS (2010) study was extensive. A total of "4,647 computer-assisted personal interviews (CAPI) were conducted" (p. 15). The findings discovered non-formal learning participation had the most significant decline of 17%, informal learning participation declined by 13%, and formal learning participation remained unchanged at 24% compared to NALS (2005) study. The study showed that learning participation was greater for employed people because of the learning opportunities offered by the employer. Informal learning participation was greater among self-employed people, and non-formal learning occurs more among economically inactive people (NALS, 2010). The findings also proved that adults that experienced any form of learning activities were willing to contribute to future lifelong learning activities financially. Formal learning and informal learning has been instrumental to people learning in the workplace, and now the theory is instrumental to the practice of learning through online education.

Online Learning involves Formal learning and Informal Learning

Administrators, faculty, and adult learners experience formal and informal learning situations through the new learning landscape of online learning (Allen & Seaman, 2016; Beatty

& Ulasewicz, 2006; Bernath et al., 2009; Islam et al., 2015). Adult learners that desire to return to school may have restrictions on their time because of personal and work-related responsibilities. Now that online learning has emerged, those learners have online educational programs to assist them in furthering their education (Zhang & Zheng, 2014). Online learning programs extend opportunities to adult learners for them to gain knowledge through formal and informal learning activities. The benefits of formal learning are: (1) large groups can meet to learn the same information at the same time regardless of space and location, (2) current information shared is in real-time, and (3) employees that attend formal learning courses are more adept at performing their jobs (Radaković & Antonijević, 2013). The benefits of informal learning include: (1) less expensive activities and offer better time management for busy professionals because of the various choices of technology devices and social media outlets, (2) may be less intimidating for learners to interact with other learners, (3) can be more personal, (4) experts in specific field may be more comfortable to share their knowledge through this approach, and (5) learning through this approach happens more naturally during the flow of someone's workday and employees may be less likely to resist change (Radaković & Antonijević, 2013).

Adult learners are able to acquire knowledge or learn a new skill at their own pace through online learning programs. Self-paced learning allows adult learners to learn at a speed that is comfortable to them (Morrison, 2003). According to Zhang and Zheng (2014), many adult learners look for asynchronous online educational opportunities because it frees "them from time and location restrictions" (p. 8). Morrison (2003) expressed that online learning is another approach for adults to utilize self-paced learning because online learning focuses on "the

quality of the learning experience not the speed" (p. 37). Adult learners who engage in self-paced learning comparably use informal learning to gain knowledge (Morrison, 2003). Czerkawski and Hernández (2013) noted, "students are no longer passive recipients of knowledge, and can now use a variety of software applications and online learning environments to engage and collaborate across time and space" (p. 341).

Faculty members engage in formal and informal learning when preparing their lesson plans for their online courses. Faculty members have to be cognizant of the instructional materials they prepare for adult learners because learners will have to use self-directed learning to complete their assignments. Faculty members have to take into consideration that adult learners learn differently, and the materials for a traditional classroom have to be modified for online learning to reflect this new style of pedagogy. Moreover, faculty members have to use self-directed learning to acquire knowledge on how to operate the LMS. Faculty members have "to explore new technology on their own by spending" (Quinney, Smith, & Galbraith, 2010, p. 205) their time to learn to operate the system to ensure lesson materials are uploaded correctly. Research has shown that when faculty and adult learners participate in formal and informal learning activities that align with personal experiences, "they are more likely to retain and apply what they have learned" (Quinney et al., 2010). Thus, the learning environment where formal learning and informal learning activities take place is instrumental in how faculty and adult learners recall how to use technology to complete tasks.

Self-Directed Learning

Self-directed learning has contributed to the practice of adult education since the 1960s (Bernath et al., 2009; Brookfield, 1983; Caruth & Caruth, 2013; Garrison, 1997; Houle 1964 & 1996; Knowles, 1975; Merriam, 2001; Mocker & Spear, 1982; Moore & FernUniversitat, 1983;

Tough 1967). Cyrill Houle (1964 & 1996), Allen Tough (1967) and Malcolm Knowles (1975)

are considered to be the pioneers of the self-directed learning theory. Houle (1964) posited that

adult learners might either take the path to learn independently or in a group. In an independent

learning environment, the learner chooses what is to be learned and how it is learned (Houle,

1964). In a group-learning environment, the learner has the option to learn independently and

return to the group to share the information or learn simultaneously with others (Houle, 1964).

Tough (1967) used the words self-teaching to identify adults that chose to act as their own

teacher by selecting and managing the information. Tough indicated, "the learner himself

assumes most of the responsibility for planning his strategy, maintaining his motivation, and

making certain throughout the learning process that everything necessary for success is done" (p.

4). Tough (1967) also stated that adults that chose to self-teach would often seek assistance from

other persons to grasp the concept that ultimately influences their learning process.

 According to Knowles (1975), teacher-directed learning was the traditional learning

process where the teacher was the center of the pedagogy process and eventually the learning

process transformed to self-directed learning due to an increase in distance education programs.

Knowles (1975) defined self-directed learning as:

> A process in which individuals take the initiative, with or without the help of others, in
> diagnosing their learning needs, formulating learning goals, human and material resource
> for learning, choosing and implementing appropriate learning strategies and evaluating
> learning outcomes. (p. 18)

Once the adult learner recognizes that he or she can take ownership of one's learning, the

individual will be empowered to explore more self-directed learning opportunities (Knowles,

1975). Brookfield (1985), another contributor to the theory, described self-directed learning as

when an adult plans and conducts his or her learning activities. Studies have shown that learners

like the convenience and flexibility that self-directed learning gives to them (Cox, 2015; Chizmar

& Walbert, 1999). In the 1990s, several scholars developed self-directed learning models for

adult education (Candy, 1991; Brockett & Hiemstra, 1991; Garrison, 1997; Grow, 1991). Self-

directed learning models focused mainly on face-to-face instruction and distance education

programs (Song & Hill, 2007). Table 4 explains the self-directed learning models for adult

education in the 1990s.

Table 4 1990s Self-Directed Learning Models

Stance	Description	Candy, 1991	Brockett & Hiemstra, 1991	Grow, 1991	Garrison, 1997
Personal Aspect	Learner recognizes individual & group learning	Personal Autonomy	Personal Responsibility	Low Self Direction	Self - Management
Personal Process	Learner is willing to self-regulate	Self - Management	Self-Directed Learning: The Process Orientation.	Moderate Self Direction	Self - Monitoring
Personal Incentive	Learner takes direction of learning.	Independent Pursuit of Learning	Self-Direction in Learning: The Vital Link	Intermediate Self- Direction	Motivation
Personal Self - Control	Learner sets own agenda of learning	Learner Control	Social Context for Self-Direction in Learning	High Self-Direction	

In the millennium era, the advancement of technology has helped transform the self-

directed learning process in adult education (Garrison & Anderson, 2003; Gu, 2016; Song &

Hill, 2007). Song and Hill (2007) developed a self-directed learning model that connects to

online learning through a learning context of an environment. Song and Hill (2007) recognized

that online learning is now part of our society's learning practice and that self-directed learning

occurs during the online learning process. Song and Hill's (2007) self-directed learning model

consists of a preliminary factor of the learner's prior knowledge and two elements: *personal attributes* (characteristics and skill set) that the learner has an *autonomous learning process* of how the learner arranges and evaluates his or her learning materials. Those two elements connect to online learning through the learning context in the environment.

In the learning context phase, two elements undergird the learning environment: *design elements* and *support elements* that will result in learning outcomes. Design elements involve how tasks are arranged in the learning process, and the support element consists of the sensible feedback from instructor or group to the learner. According to Song and Hill (2007), the addition of the learning context to their self-directed model affects the learner in several ways. The learning context "plans, monitors, and evaluates the learning process and has the potential to influence how a learner becomes motivated to learn, and how he or she uses various resources and strategies to accomplish learning in the specific learning context" (p. 33).

In general, scholars have explained self-directed learning in two categories (Bauer, 1985; Candy, 1991; Brockett & Hiemstra, 1991; Cross, 2007; Garrison, 1997; Mocker & Spear, 1982; Song and Hill, 2007). The first category is when a facilitator or organization will arrange instructional material to the autonomy level of the learner (Bauer, 1985; Harrison, 1978). The second category is when the learner will categorize instructional material based on his or her personal preference (Garrison, 1997; Mocker & Spear, 1982). These two self-directed learning categories are frequently utilized in higher education and organizations in the 21st century because of the internet (Cross, 2007; Mocker & Spear, 1982). Cross (2007) noted that 80% of workplace learning is self-directed. Higher education institutions use both categories to adapt their training practices for faculty to help them learn how to operate and manage an LMS

(Candy, 1991; Gu, 2016). Self-directed learning, informal learning, and on-the-job-training are interlinked to assist with the learning process.

On-the-Job-Training

On-the-job training is another method of workplace learning (Jacobs & Park, 2009). Peterson (2010) defined on-the-job training as "one-on-one instruction between employees and supervisors or between coworkers" (p. 245). On-the-job training has two styles of learning: structured on-the-job training and unstructured on-the-job training. Structured on-the-job training is also referred to as formal learning or non-formal learning where the training activities are prescheduled at work, or a training location and a facilitator controls the learning process (Jacobs & Park, 2009; Peterson, 2010). According to Peterson (2010), the most effective on-the-job training occurs when "classroom activities are combined with actual job duties to allow reflection about the task" (p. 245). Higher education institutions and many organizations are increasing their expenditures to fund employee on-the-job training (Ho, 2017). Ho's (2017) annual employee learning report indicated that 65% of organizations are committed to having structured on-the-job training for their employees and that 49% of employee training is through the traditional face-to-face classroom method. According to Ho (2017), two-thirds of organizations make on-the-job training a top priority for their employees.

Unstructured on-the-job training happens frequently and unexpectedly as employees perform their jobs (Ho, 2017; Jacobs & Jones, 1995). Jacobs and Jones (1995) described unstructured on-the-job training is when an individual acquires job knowledge and skills from impromptu explanations or demonstrations by others; through trial-and-error efforts, self-motivated reading, or questioning on their own; or simply by imitating the behavior of others" (p. 18). Unstructured on-the-job training has increased over the years because of the

advancement of technology that uses an LMS (Ho, 2017). In 2016, 45% of organizations used "online or satellite classrooms, self-paced online or non-networked computer-based methods, mobile devices, or non-computer technology" (Ho, 2017, p. 42) for unstructured on-the-job training. Manufacturers are designing LMSs to be more user-friendly which has helped boost the practice of unstructured on-the-job training (Davis, Carmean, & Wagner, 2009; Ho, 2017). Unstructured on-the-job training can also be classified as informal learning, self-directed learning, and experiential learning (Ahadi & Jacobs, 2017), in which, all methods can be used by faculty for a technology adoption.

Experiential Learning Theory

The experiential learning theory originated from the work of John Dewey, Kurt Lewin, and Jean Piaget. Dewey, Lewin, and Piaget all made significant contributions to the literature that developed the experiential learning theory. Those scholars recognized learning could occur in many settings different from the traditional classroom. They understood that "learning from the experience is an act of meaning making mediated through communication" (Boucouvalas & Lawrence, 2010, p. 39). The experiential learning theory can be a valuable source for learning that occurs in the everyday experiences of human behavior (Gould, Stapley, & Stein, 2004). The learning experience is not restricted to a formal classroom setting but can occur in informal classroom settings (Kolb, 1984). Scholars acknowledged experiential learning might occur individually, in a group, in an organization, or in a social/civic group association (Beard & Wilson, 2013; Kolb, 1984). According to Gould et al. (2004) "academic or book learning on its own cannot be a substitute for learning from experience and may only play a supplementary role" (p. 21) in the learning process.

Fenwick (2000) stated the term experiential learning is used to distinguish "the ongoing meaning making from theoretical knowledge and non-directed informal life experience from formal education" (p. 1). The experiential learning theory may be viewed as a lifelong learning process because experiential theory has no restrictions on time, space, or place (Beard & Wilson, 2013). Many scholars consider experiential learning as a holistic process (Kolb, 1984). "Holism is a belief that individuals learn through continuous interaction with the community and the environment" (Smith, 2010, p. 152). Kolb (1984) explained experiential learning as holistic because it combines "experience, perception, cognition, and behavior" (p. 21) which allows the learners to experience the learning process socially and each learner could have a different meaning. Scholars posit that experiential learning theory fosters self-reflection for all participants to share in their meaning making from an experience (Fenwick, 2000; Kolb, 1984; Zijdemans-Boudreau, Moss, & Lee, 2013).

Fenwick (2000) created five perspectives to explain experiential learning: (1) reflection perspective (constructivist theory) is where the learner makes his or her meaning from the experience; (2) interference perspective (psychoanalytic theory) is how the learner handles his or her internal conflict; acceptance of yourself; (3) participation perspective (situative theory) is how an individual can function in activities; social and individual activities are inseparable; (4) resistance perspective (critical cultural theory) is the individual's viewpoint to power, political stance, and culture in reference to learning, and (5) co-emergence perspective (complexity theory) is how the learner can adjust to new situations in new environments. Fenwick's viewpoint about experiential learning is different from Kolb's viewpoint. Fenwick's viewpoint is subjective, and Kolb's viewpoint is objective. However, both of their perspectives contributed to the development of the experiential learning theory.

In this study, faculty members' experiences will be examined through Fenwick's five perspectives as they learn how to operate and manage a new LMS. This case study was developed with a constructivist lens that investigated faculty members' perspectives as they underwent the technology adoption of the new Blackboard LMS. As Fenwick (2003) mentions, "in adult education, the constructivist view of experiential learning has helped educators focus on the learner, and particularly on learners' active meaning making processes, challenging the assumption that learners passively absorbed information presented to them" (p. 24). Furthermore, for this study, the culture of the environment and social interaction that faculty members experienced affected their meaning-making process and was examined using the situated cognition theory.

Situated Cognition Theory

During the middle years of the 20th Century, there were some scholars that believed learning was connected to the environment where the activity took place (Dewey, 1938; Leontiev, 1978; Luria, 1978; Vygotsky, 1978) which contradicts other scholars' belief that the environment had no effect on the learning process (Bereiter, 1987; Boaler, 1993; Renkl, Mandl, Gruber, (1996). In *Experience and Education,* Dewey (1938) expressed that learning in a natural setting was just as important as learning in a traditional setting. In addition to Dewey, there were some psychologists through their research that recognized how the environment contributed to the learning process (Leontiev, 1978; Luria, 1978; and Vygotsky, 1978). During the latter part of the 20th Century, situated cognition theory emerged in the field of educational psychology that furthered an ongoing debate among scholars of how an environment influences a person's learning process (Brown, Collins, & Duguid, 1989; Jenlink, 2013; Lave, 1988). The pioneer of situated cognition was Jean Lave (1988) who introduced the theory through the book *Cognition*

in Practice: Mind, mathematics, and everyday practice. Lave's (1988) findings from the study revealed the transfer of learning occurred in socially situated settings rather than the traditional cognition process when the "individual mind of the learner is decontextualized from the lived-in world" (Jenlink & Austin, 2013, p. 185). Lave's (1988) perspective on learning was that "the social practices are produced and reproduced activity in the world, dialectally, rather than exclusively within or between persons" (p. 193).

Situated cognition is also known by different names: cognitive apprenticeship, contextual learning, legitimate peripheral participation, and situated learning. The foundation of situated cognition is embedded in the philosophy of constructivism (Jenlink, 2013; Merriam & Bierema, 2014). Constructivism emphasizes that learning is bound to the environment where the experience takes place, and the situated cognition theory undergirds that perspective. Merriam and Bierema (2014) expressed situated cognition theory as the process when "learning occurs as people interact with other people in a particular context with the tools at hand (tools can be objects, language, or symbols)" (p. 118). Many scholars use the situated cognition theory to investigate real-world experiences through *in situ* (the original place of the experience) to research how the environment impacts the learning experience for a student (Durning & Artino, 2011). In other words, situated cognition embraces the "natural learning environment that engages the learner in solving authentic, complex, nonroutine problems, which they would likely encounter in a professional or work-life situation" (Jenlink, 2013, p. 186). Thus, over the past decade, the theory of situated cognition has impacted how online environments are designed, and in turn, how faculty instruct using these online learning environments.

McLoughlin and Luca (2006) conducted a case study that examined senior-year college learners in an online class that developed websites that used "multimedia products" (p. 12). The

learners were required to work in teams of four or five for 13 weeks where they used project

management models to create websites (McLoughlin & Luca, 2006).   The study aimed to

examine the team's collaborative and social skills in a situated environment where there was

limited interaction between student and teacher (McLoughlin & Luca, 2006). This case study is

comparable to my study because it describes how adult learners are expected to work

independently and socially in a specific learning environment. McLoughlin and Luca (2006)

used Herrington and Cowan's (2000) situated cognition design parameters to analyze their data.

Table 5 explains Herrington and Cowan (2000) nine parameters of a situated learning

environment.

Table 5 Herrington and Cowan Nine Parameters

Provide *authentic contexts* that reflect the way the knowledge will be used in real life
Provide *authentic activities*
Provide access to *expert performances* and the modeling of processes.
Provide *multiple roles and perspectives*
Support *collaborative construction of knowledge*
Promote *reflection* to enable abstractions to be formed
Promote *articulation* to enable tacit knowledge to be made explicit
Provide *coaching* and *scaffolding* by the teacher at critical times
Provide for *authentic assessment* of learning within the tasks

The nine parameters were a checklist of guidelines that described the "instructional design of a

learning environment which enables the situated elements to be operationalized, together with

supporting authors, researchers and theorists" (McLoughlin & Luca, 2006, p. 4). McLoughlin

and Luca's (2006) findings revealed that the learning environment did duplicate real-life scenarios that had a positive influence on learner interaction with each other and learners experienced conflict where they witnessed other learners not helping with their group project.

Over the years, several scholars have disagreed with the situated cognition theory (Bereiter, 1997; Boaler, 1993; Salomon & Perkins, 1998). Bereiter (1997) believed an individual that learns in one situation does not automatically transfer the *learned intelligent behavior* to other situations. Berietier (1997) stated, "the only way to transfer *learned intelligent behavior* is through *abstract* relationships that have symbolic representations of situations and carry out operations on those symbols" (p. 10). Boaler (1993), another scholar that differed with Lave's learning theory noted that learning was individually formed and not influenced by the environment. Boaler (1993) stated, "students will transfer from one task to another, even when the external cues are different when they have developed an understanding of the underlying processes which link the problem requirements and their significance in relation to each other" (p. 7). Furthermore, Salomon and Perkins (1998) strived to show that individual learning and social learning were interrelated not separate approaches to learning. Salomon and Perkins (1998) expressed, "individual learning is rarely truly individual; it almost always entails some social mediation, even if not immediately apparent" (p. 3). The situated cognition theory intertwines with the formal, non-formal, and informal learning theory for my study because both theories bound the phenomenon that I investigated in a specific environment.

Technology Adoption

Technology adoptions of new LMSs are common in the 21st century because of rapid changes in the internet and digital technology. Over the years, scholars have used the technology adoption paradigm to investigate the reasons faculty accept or reject a change in technology

(Buchanan, Sainter, & Saunders, 2013; Padilla-Meléndez, Aguila-Obra, & Garrido-Moreno, 2013; Rucker & Frass, 2017). Scholars have also reiterated that as technology changes more research is needed about technology adoption of an LMS to determine what new training and support components to offer faculty; and the frequent errors and issues encountered during the adoption process (Buchanan et al., 2013; Ge et al., 2010; Rucker & Frass, 2017). Studies have shown that some faculty members are hesitant in learning new technology because of their unwillingness to learn new technical skills either because they simply do not want to change or because they see no reason for the change (Buchanan et al., 2013; Davis, Carmean, & Wagner, 2009; Padilla-Meléndez et al., 2013; Rucker & Frass, 2017). Higher education administrators that choose to use the latest technological invention for their LMSs want faculty to accept the change in technology to help with the ease of the adoption. According to Godoe and Johansen (2012), a technology adoption research aims to find ways to improve efficiency and effectiveness for the users.

The technology adoption paradigm was developed from the theory of planned behavior (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975) and the technology acceptance model (Davis, 1989). The theory of planned behavior was developed in the social psychology field as an extension to the theory of reasoned action (Ajzen, 1991; Ajzen & Fishbein, 1980). Ajzen and Fishbein (1975) developed the theory of reasoned action model to examine any form of individuals' behavioral intentions and performance (Davis, Bagozzi, & Warshaw, 1989). Theory of reasoned action reviewed a person's (or population's) attitude toward a particular "behavior as well as the subjective norms of influential people and groups that could influence those attitudes" (Lezin, 2016, para. 4). The theory of reasoned action was a general model that provided the foundation for future models that examined human behaviors and other subsequent technology

acceptance or adoption models (Ajzen, 1991; Sundaravej, 2010). Ajzen and Fishbein, (1980) later developed the theory of planned behavior model, which was an extension to the theory of reasoned action model.

The theory of planned behavior was "designed to predict and explain human behavior in specific contexts" (Ajzen 1991, p. 181). The premise of the theory of planned behavior is that perceived behavior combined with intended behavior predicts a particular behavioral outcome (Ajzen, 1991, 2005). Through the 1970s and the late 1980s, the theory of planned behavior was frequently used to investigate technology changes in organizations (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975; Sundaravej, 2010; Davis, 1989). In 1989, Fred Davis developed the technology acceptance model (TAM) that fostered a new scale with two specific variables (perceived usefulness and perceived ease of use) to determine user acceptance of technology (Davis, 1989; Venkatesh, Davis, & Morris, 2007).

The technology acceptance model examines users' perception of not wanting to accept a change in technology (Davis, 1989). The technology acceptance model describes "the issue of how users accept and use a specific technology, as a function of the causal relationships between systems design, features, perceived usefulness, perceived ease of use, attitude toward using, and use'' (Padilla-Mele´ndez, et al., 2013, p. 307). Davis (1989) described perceived usefulness "as the degree to which a person believes that using a particular system would enhance his or her job performance" and perceived ease of use as "the degree to which a person believes that using a particular system would be free of effort" (p. 320). The technology acceptance model has frequently been used in research to examine organizations' technology adoptions (Adams, Nelson, & Todd, 1992; Karahannaa & Straubb, 1999; Venkatesh et al., 2007). Moreover, there have been several technology acceptance and adoption models that have been compared to

Davis's (1989) model (Samaradiwakara & Gunawardena, 2014). The most notable theory is the Diffusion of Innovation Theory by Rogers (1995), which has been widely used to examine the adoption of an LMS.

Diffusion of Innovation Theory

Everett Rogers is considered the father of diffusion of innovation theory (Hall, 2005). The diffusion of innovation theory has been used as a theoretical framework in many disciplines (humanities, social sciences, sciences, and technology) for research (Rogers, 2003). Diffusion of innovation "presents a way of explaining and predicting the adoption or rejection of new ideas and practices" (Warford, 2005, p. 3). Katz, Levin, and Hamilton (1963) defined diffusion in seven components the "(1) acceptance, (2) over time, (3) of some specific item—an idea or practice, (4) by individuals, groups or other adopting units, linked, (5) to specific channels of communication, (6) to a social structure, and (7) to a given system of values, or culture" (p. 240). Rogers (2003) defined diffusion as "the process in which an innovation is communicated through certain channels over time among the members of a social system" (p. 5). Katz et al.'s, (1963) and Rogers (2003) definitions are similar, and both scholars recognized the importance of communication in the process of diffusion.

The diffusion of innovation communication channel is a unique approach because it is concerned with conveying new ideas that pertain to technology (Rogers, 2003). Rogers (2003) explained communication as the "process in which participants create and share information with one another to reach a mutual understanding" (p. 5). The process of communication in diffusion is unique because it aims to express the newness of the idea (Rogers, 2003). Rogers (2003) uses the term newness as "some degree of uncertainty is involved in diffusion" (Rogers, 2003, p. 6). Diffusion is a type of alteration in the infrastructure of an organization (Rogers, 2003).

The diffusion of innovation theory consists of four main elements: innovation, communication through specific modes, over time, and a social system (Rogers, 2003). These elements are used to identify and explain the primary premise of an academic research study or a private industry product or service campaign or program (Rogers, 2003). Innovation is the first commercialization for the adoption of an idea (Hall, 2005). Innovation is the newness of an idea to an individual or social system. Newness did not necessarily have to mean an actual new innovation but an innovation that may have already existed but had not been adopted or rejected by an individual or group (Rogers, 2003).

Innovation

The innovation element has five essential components for the rate of adoption: relative advantage, compatibility, complexity, trialability, and observability (Rogers, 2003). Relative advantage is when the new innovation is better than the previous innovation (Rogers, 2003). Compatibility is when the new innovation is considered compatible with the current beliefs and norms of the adopters (Rogers, 2003). Complexity is the degree to which the new innovation is perceived as challenging to understand (Rogers, 2003). Trialability is the trial basis to test out the innovation (Rogers, 2003). Observability is the visibility of the new innovation and its results by the adopters (Rogers, 2003). If an individual or social system can have a probationary period when the four components can test the innovation, then there is a high probability the innovation will be adopted (Rogers, 2003).

Communication

Communication is one of the central elements in the diffusion of innovation process because the mode of communication affects how adopters perceive the innovation (Rogers, 2003). According to Rogers (1995), communication is the process by which adopters create and

share information with each other to reach a collective understanding. There are several different approaches an organization may use to convey an idea such as an internal and/or external marketing campaign, surveys, interviews, and word of mouth between individuals or groups (Rogers, 2003). Rogers (1995) stated, "most individuals evaluate an innovation, not from scientific research by experts, but through the subjective evaluations of near-peers who have adopted the innovation" (p. 25). Thus, it is vital for researchers to take subjective comments serious for the adoption of an innovation.

Over Time

The element of time is intermingled in diffusion through three stages: (1) the innovation-diffusion process, (2) innovativeness, and (3) an innovation's rate of adoption (Rogers, 2003). The innovation diffusion process is when the individual or group forms an opinion about the innovation to either adopt or reject it and to justify the decision (Rogers, 2003). The innovativeness is when adopters accept the innovation at an earlier stage than others do. Rogers (2003) listed five categories of adopters: "(1) *innovators* are the people that thrive on cutting edge technology: venturesome; (2) *early adopters* are the people (mostly leaders) that are respected in the social system that do not want to be the test subject but still want to be first in using the innovation; (3) *early majority* are the people that see earlier on that the innovation is working well and decided to adopt the idea; (4) *late majority* are the average people that recognize the idea is succeeding and will adopt it; and (5) *laggards* are the people that intentionally wait until the majority of the innovation kinks are fixed before moving forward with the adoption process" (p. 22). The innovation's rate of adoption is the individual or group swiftness to adopt the innovation.

Social System

Social System is the final element in the diffusion process. The social system is defined as a "set of interrelated units that are engaged in joint problem-solving to accomplish a common goal" (Rogers, 2003, p. 23). Social system members can be comprised of individuals, groups, and / or organizations (Rogers, 2003). The social system members are unified together by the common goal of either accepting or rejecting the innovation (Rogers, 2003). Rogers (2003) defined structure as the "patterned arrangements of the units in a system" (p. 24). Rogers also stated the structure provides stability in human behavior which allows an individual to predict with accuracy another person's behavior.

The four main elements of the diffusion of innovation theory (innovation, communication, over time, and a social system) will assist in examining faculty formal and informal learning experiences due to the technical college adoption of the Blackboard LMS. First, the innovation element can be combined with the formal and informal learning theory in determining the complexity of learning the Blackboard system. Second, the level of communication can be combined with the situated cognition theory in examing the various communication methods used by administrators, instructional designer(s), and faculty members were beneficial in learning to use the Blackboard LMS. Third, the time element has the five categories of adopters (innovators, early adopters, early majority, late majority, laggards) to help understand which category faculty members were in when acquiring knowledge to manage the Blackboard LMS. Fourth, the social system element can be combined with the technology adoption model to help understand the faculty's perceived usefulness and perceived ease of use of the Blackboard system.

Concerns-Based Adoption Model

The concerns-based adoption model (CBAM) was created by Hall, Wallace, and Hall in 1973 from Fuller's 1970 and later modified by Fuller & Bown, 1975 teacher-concerns model. The teacher-concerns model was developed from "a personalized teacher education program where student-teacher concerns moved through four levels: unrelated, self, task, and impact" (Hall & Hord, 2011, p. 69). The authors of CBAM, along with Frances Hord, adopted those four levels and created three diagnostic dimensions: innovation configurations, stages of concern, and levels of use. CBAM was developed to evaluate, manage, and understand a person's perspective during a change process (Hord, Rutherford, Huling-Austin, & Hall, 1987, 2014). CBAM is designed to help change facilitators identify the needs of individual users and make the necessary changes to fix a situation. CBAM is another theoretical framework that was used to analyze the findings in this case study.

CBAM's first dimension, innovation configurations (IC) is to "develop and apply word-picture descriptions of what the use of an innovation can look like—that is, how does it look in operation, what are individuals doing related to the innovation" (Hall & Hord, 2011, p. 44). IC provides a guide that change facilitators can follow to implement a change in an organization. For instance, a human resource trainer will develop a map, procedures, or steps with detailed descriptions for employees to follow to implement the components of a change process.

The second dimension is the stages of concern (SoC) model that assesses "the feelings and perceptions of individuals, groups, and whole staffs" (Hall & Hord, 2011, p. 89). When a change is implemented in an organization, the people that are affected by the change will experience different emotions about the implementation process and long term effect of the innovation. The SoC model was developed to evaluate those emotions. The SoC model uses four

categories originated by Fuller (1970): unrelated, self, task, and impact that comprise the seven stages of concern that range from zero to six: (0) unconcerned, (1) informational, (2) personal, (3) management, (4) consequence, (5) collaboration, and (6) refocusing. Hord et al., (2014) provided an important caveat about the SoC model:

> While the seven stages of concern are distinctive, they are not mutually exclusive. An individual is likely to have some degree of concern at all stages at any given time, yet our studies have documented that the stage or stages where concerns are more (and less) intense will vary as the implementation of change progresses. (p. 30)

The first category, unrelated includes stage zero-unconcerned, is where the user has little concern about the innovation and is concerned about other things. The second category is self, that includes stages one and two. Stage one-informational occurs when the user is inquisitive about the innovation and stage two-personal is when the user ponders the demands of the innovation. The third category is task, that consist of stage three-management when a user is concerned about the amount of time he or she is spending to learn the innovation. The last category is impact that comprises the last four stages of the SoC model. Stage four-consequence happens when the user is concerned on how the innovation affects his or her clients. Stage five-collaboration occurs when the user is concerned about collaborating with his or her colleagues on the use of the innovation. Lastly, stage six-refocusing is when the user has definite suggestions to improve or replace the innovation.

The SoC model is a method to evaluate how change facilitators implement an organizational change as either a process or an event. If the change is implemented as an event then the SoC model "breaks down and people are forced into sustained self and/or task concerns" (Hall & Hord, 2011, p. 74). Additionally, the SoC model has a thirty-five item questionnaire,

stages of concern questionnaire (SoCQ) that can be administered to users to help determine appropriate staff development activities and change implementation processes. The primary focus of the SoC model and SoCQ is to evaluate users' attitudes and feelings about the innovation.

The last diagnostic dimension of CBAM is the levels of use (LoU). LoU "has to do with the behaviors and portrays how people are acting with respect to a specific change" (Hall & Hord, 2011, p. 93). LoU pinpoints users that are actually using the innovation efficiently, the users that are still testing the innovation, and the users that have not begun using the innovation (Hord et al., 2014). LoU has two categories that consist of eight levels. The first category is titled nonusers. Nonusers comprise levels zero, one, and two. Level zero nonuse is when the user has little to no involvement with the innovation. Level one-orientation occurs when the user inquires information about the innovation. Level two-preparation occurs when the user decides to use the innovation.

The second category is titled users. The category of users encompasses levels three, four, five, six, and seven. Level three is mechanical use that the user learns certain aspects of the innovation for short-term selfish usage not for long-term mastery. Level four/a–routine denotes that there are no more changes to the innovation and the user does not need any more assistance. Level four/b-refinement implies that a user will do a reflection to determine how well he or she is using the innovation to the benefit of the client. Level five-integration occurs when users join together to determine if they are using the innovation effectively and if not in what ways can they improve the innovation. Lastly, level six-renewal is when a user determines after usage that they can make the innovation better or suggest for it to be replaced with a better innovation. LoU primary focus is to evaluate users' behaviors and actions when using the innovation.

Chapter Summary

This literature review covered three main sections of research that relate to this study. The first section chronicled correspondence education, distance education, and online learning and described the progress made in adult education through distance learning over the past century. The second section described an LMS and its importance in today's higher education systems because of the advancement of technology that has changed faculty teaching practices and the overall landscape of asynchronous and synchronous learning. The third section reviewed theoretical frameworks formal and informal learning, experiential learning, situated cognition, technology adoption, diffusion of innovation, and concerns-based adoption model that are all interconnected when a higher education institution chooses to adopt technology and how that adoption affects its faculty.

CHAPTER 3

RESEARCH METHODOLOGY

The purpose of this study was to examine the learning experiences of faculty at a state technical college who were required to participate in a new technology adoption of the Blackboard Learning Management System (LMS). Two research questions guided this study:

1. What were the common learning experiences of faculty participating in the adoption of a new learning management system?

2. How did the participating faculty navigate the requirement to learn or adapt to a new system?

In this chapter, I will describe the methodology used to examine the two research questions that guided this study. This chapter will include a summary of qualitative research, the design of the study, sample selection, data collection, data analysis, trustworthiness, subjectivity statement, and chapter summary.

Qualitative Research

Qualitative research aims to understand how people make meaning of a phenomenon by evaluating various data sources in their natural setting and conveys the findings through descriptive data, which is different from quantitative research that conveys findings through numeric data (Denzin & Lincoln, 2013). Researchers that use the qualitative approach seek to understand how meaning is constructed through individual experiences (Denzin & Lincoln, 2005). Qualitative researchers progressively seek to improve practice because there are frequent changes in policies, procedures, situations, practice, and technology in those applied fields

(Maxwell, 2013). Qualitative researchers can use an interpretive approach combined with a social constructivist philosophy to investigate a phenomenon (Bogdan & Biklen, 2007; Creswell, 2009; Merriam, 1998).

The interpretive paradigm is frequently used in adult education and human resource development fields because those applied fields focus on practice and individual human behavior (Cranton & Merriam, 2015; Maxwell, 2013). Interpretivism seeks to understand individual perspectives that experienced an identical situation in the same environment. The social constructivism theory holds the assumption that learning is not separate from the environment from which individuals learn. Vygotsky (1978) noted that cooperative learning helps create a deeper level of understanding. Qualitative researchers frequently use the interpretive paradigm in conjunction with the social constructivism theory to examine the social context where people live, learn, and work. For this study, the interpretive paradigm and social constructivism were the suitable methods to investigate faculty formal and informal learning a technology adoption of the Blackboard LMS.

The literature revealed that majority of the LMS technology adoption studies examined faculty and student perspectives through quantitative research methods (Bolliger & Wasilik, 2009; Gautreau, 2011; Georgina & Olson, 2008; Gomez, 2015; Keengwe & Georgina, 2011; Little-Wiles, Hundley, Worley, & Bauer, 2012; Monett & Elkina, 2015; Outlaw, 2015; Seaman, 2009). The literature provides few qualitative studies that examine faculty learning experiences during a technology adoption of an LMS. This study helps to narrow that gap because it provides insight into the encounters, impediments, and supports that faculty experienced through an LMS technology adoption. Moreover, many researchers use qualitative inquiry because it offers different designs to investigate a phenomenon such as action research, case study,

ethnography, grounded theory narrative, and phenomenology (Patton, 2002). A case study

design was chosen to investigate the phenomenon, and the next section explains the details of the

methodology.

Design of the Study

A case study is one of many designs used by qualitative researchers to investigate

phenomena. Researchers that choose a case study design seek to discover what uniquely may be

learned from events, practices, and programs (Stake, 2005). Yin (2009) described case study

research as a real-world inquiry that examines a phenomenon within its actual environment

where the boundaries of the phenomenon and environment are not well defined. According to

Cranton and Merriam (2015), case study research investigates a particular phenomenon that may

involve a person, group, or organization. The case study design allows researchers to ascertain

and maintain all real-life materials to assist with the data analysis process to generate findings

(Yin, 2009). A case study design has unique features that give researchers the flexibility to

answer *how* and *why* questions through an in-depth process that captures the human experience

that may lead to new understandings of context and processes (Denzin & Lincoln, 2013).

There are different types of case studies that qualitative researchers can use to investigate

a phenomenon such as intrinsic, instrumental, and collective designs (Bogdan & Biklen, 2007;

Leavy, 2014; Maxwell, 2013; Stake, 1998). Stake (1998) explained that an intrinsic case would

focus on the case itself because it presents a unique issue or situation. An instrumental case

seeks to provide a better understanding of a particular issue or situation, and the case is of

secondary interest that provides a supportive role (Stake, 1998). A collective case consists of an

instrumental design that covers multiple cases that examine a phenomenon (Leavy, 2014; Stake,

1998). The multiple case design may be "similar, dissimilar, or redundancy that leads to a better

understanding about a larger collection of cases" (Stake, 1998, p. 138). All three case study designs can have multiple data sources such as interviews, observations, focused groups, surveys, critical incidents, and document review of personal and /or professional records. Case study design entails purposeful selection of a particular case, location, theory, and questions to investigative a phenomenon (Bogdan & Biklen, 2007; Maxwell, 2013). This research study was a single instrumental case because it focused on a single phenomenon, bound at one site, that targeted a specific group, and particular timeframe.

Research Site

This case study was bound to faculty members that experienced a technology adoption of the Blackboard LMS at state technical college (STC) in the academic year of 2016 - 2017. Yin (2014) noted that when a researcher is contemplating a new research study, it is essential for the researcher to define the case or unit of analysis to be studied to set limits or bounds to the case. Merriam (1998) stated that to bound a case is to fence it in by presenting specifications to the phenomenon. The specifics of what to study and at what site are the initial components of building the foundation for a case study.

I have access to STC because I have been employed there as an adjunct faculty member for four years. I presented my research proposal to the Executive Vice-President, Vice-President of Academic Affairs, and Vice-President of Institutional Effectiveness and they granted me a conditional approval upon IRB approval to conduct my research at STC. Once I received IRB approval, I submitted the approval letter to the STC Interim Vice-President of Academic Affairs, and he permitted me to start with the recruitment process for this study. The recruitment letter (Appendix B) and consent form (Appendix C), are attached to the end of this study.

STC is one of twenty-two public two-year colleges in the Technical College System of Georgia (TCSG). STC has one main campus, three satellite campuses, three learning centers, and three academies that serve four state counties. For the fiscal year of 2017, STC had 6,020 enrolled students. Of that number, 4,900 students (81%) took at least one online class. The enrollment of female students was 65%, and male students are 35%. The age range of students was 40, and over 17.5 %, ages 40 – 31 are 19%, ages 30 -21 was 33.4% and under age 21 is 29.8%. Part-time students had the highest enrollment at 78.2%, and full-time students had the lowest enrollment at 21.87%. The ethnicity of the students was African American 80.6%, White 9.6%, Hispanic 3.3%, Asian 2.4%, and other 4.1%. In 2017, the technical college awarded 65.9% of technical certificates, 19.1% of diplomas, and 14.9% of associated degrees. There were 486 faculty members, where 18.1% are full-time, and 81.9% were adjunct faculty members (part-time). An average student to teacher ratio for face-to-face, hybrid, and online classes was 15:1.

STC used the Angel LMS system prior to the technology adoption of the Blackboard LMS. STC used the Angel LMS for five years until Blackboard Incorporated purchased Angel Learning (Jaschik, 2009). Since the acquisition, the Blackboard LMS has been the primary system for faculty members to manage their instructional materials to teach their face-to-face, hybrid, and online classes. Gregory and Lodge (2015) stated that the use of an LMS by faculty members could improve instructional practices and enhance student-learning outcomes. Faculty members at STC are required to maintain their gradebooks in the Blackboard LMS; however, some schools within STC allow their faculty members to maintain instructional materials in other learning platforms where students will complete assignments. Furthermore, faculty members are required to use STC email account to communicate with students.

Sample Selection

Purposeful sampling was the main strategy chosen to select participants for this study. Purposeful sampling is the belief that the researcher "must select a sample from which the most can be learned" (Merriam, 1998, p. 61). Purposeful sampling involves a sampling selection strategy that specifies the unit and a tentative number of participants for the study (Yin, 2011). I chose STC for the research site and phenomenon topic because the literature revealed few research studies focused on faculty experiences of a technology adoption at STC. My connection to STC is elaborated more in the subjectivity statement section in this chapter.

Faculty recruitment

Purposeful sampling may be used with other sampling strategies to recruit participants that may occur before and during the data collection process (Merriam, 1998). In this study, I combined purposeful sampling with criterion sampling to recruit participants. Criterion sampling is when participants have to meet certain criteria to participate in the study (Bloomberg & Volpe, 2016). The criteria for participants to participate in this study were:

1. Participants had to be full-time or adjunct faculty at STC.

2. Participants must have taught a class (face-to-face, hybrid, or online) using the Blackboard system at STC during the academic year 2016 - 2017.

The rationale for using that criteria were to exclude the administrative staff that had access to the Blackboard LMS for other purposes than teaching (e.g., registrar, financial aid, and admissions). The recruitment letter was emailed to 432 faculty members in every school. Recruitment flyers were placed on tables and hung on doors in the main offices of each school at STC. Eight faculty members from three different schools contacted me through email to volunteer for this study. The methodology of a qualitative case study design was a suitable fit to investigate the

proposed phenomenon because of the flexibility to purposefully select a site and group that are relevant to the theoretical framework and questions for this study. Moreover, the case study method allowed me to examine the study holistically with the ability to use multiple data sources.

Data Collection

Data collection for a qualitative case study is typically extensive and uses multiple types of data sources (Bloomberg & Volpe, 2016; Bogdan & Biklen, 2007). Data sources may consist of interviews, document review, photos, notes, observation, and surveys. A researcher should use multiple methods of data collection, especially for case study research to decrease errors and to conduct cross-data validity checks (Patton, 2002). In this study, semi-structured interviews, emailed documents, and observational memos were the three data sources that compose the data corpus. The semi-structured interviews were the dominant source of the data corpus. Eight participants were separately emailed a consent form to review and return signed before the participant's interview. As the consent forms were received, I reviewed them to ensure that each participant met the criteria and asked for their preference of time and location for the interview.

Two participants were separately interviewed face-to-face in their offices at the STC campus. The other six participants requested telephone interviews that were separately done at a convenient time for them. Roulston (2013) indicated that interviews might take place face-to-face individually, in groups, or with video telephony applications. I used a digital recorder to record all interviews. I created and used an interview guide to assist me in asking questions to the participants. An interview guide will contain specific open-ended probing questions and a list of other topic areas that will be used by the researcher during the interviews (Merriam, 1998). The interviews lasted between thirty minutes to an hour. When the individual face-to-face interviews

were completed, I presented each participant with a five-dollar gift card to Chick-Fil-A to show

my appreciation for their participation. Once I completed each of the six remaining telephone

interviews, I mailed through the United State Post Office a Chick-Fil-A gift card to each

participant.

Documents that were relevant to the purpose of this study were used as part of the data

collection process. According to Merriam (2009), documents can be about anything that relates

to the research study. Prior to conducting interviews, some documents were collected that were

sent to faculty from the Online Director and Online Administrator about the formal learning

process of the Blackboard LMS. Seventy-seven emailed documents were reviewed from the

year 2015 through the end of the year 2017. I chose to review emailed documents at the start of

the fourth quarter (October) of the year 2015 since that was when faculty members began to

receive formal communication about the transition from the Angel LMS to the Blackboard LMS.

A reflective journal was also kept during the research process. A reflective journal allows

the researcher to track research activities, personal feelings, questions, theoretical concerns, and

tentative interpretations (Bloomberg & Volpe, 2016; Bogdan & Biklen, 2007; Creswell, 2009).

Reflective journals can also include observational memos that supplement interview data.

Observational memos are the in-depth written accounts of what the researcher sees and hears

during the data collection process (Holliday, 2016). Observational memos were written before

and after the two face-to-face interviews that describe the office settings and facial expressions

that were not captured on the audio recordings. For example, I describe Ava's office

environment and her facial expressions when she spoke passionately about learning how to

operate the Blackboard LMS. For the six telephone interviews, I wrote memos during and after

the participants' interviews to explain their feelings and utterances so that I could form a mental

picture of the person's point of view. For instance, Ola teaches mathematics, and she expressed

that the Blackboard LMS is just a host system and that the students actually do their classroom

assignments in Educosoft, a learning platform. During her interview, she breathed in trepidation

because she never received formal learning for Educosoft. Ola made long sighs as she explained

her self-directed learning of Educosoft and that she uses the Blackboard LMS to communicate

with students. Thus, the observational memos contribute to the data corpus to help understand

faculty experiences. The data collection of three data sources are particularly valuable for

triangulation, data analysis, and interpretation of findings to undergird the qualitative research

process for this study.

Data Analysis

Data analysis is a significant component of qualitative research that helps to understand

the phenomenon. The data analysis process requires the researcher to meticulously analyze the

data into feasible parts to code, categorize, then search for emerging patterns (Bogdan & Biklen,

2007). For this study, the constant comparative method was used to analyze the data. NVivo, a

computer-assisted qualitative data analysis software (CAQDAS) was also used to help with the

organization of coding the data. The constant comparative method is the process of comparing

multiple data sources for similarities and differences throughout the study (Bogdan & Biklen,

2007; Corbin & Strauss, 2008; Fram, 2013). The constant comparative method can be used with

other coding strategies to help with the reduction of data, the arrangement of codes, and the

creation of themes.

In vivo coding, focus coding, and holistic coding were the additional coding strategies

used in this study. In vivo coding was the primary coding strategy used to code participants'

transcripts line by line. The in vivo coding process uses the participant's own language for coding (Saldaña, 2016). Once the first interview was completed, it was transcribed saved to a secure electronic location. Pseudonyms were used for participants to protect anonymity. The transcript was printed, and a manual coding process was started that used in vivo coding with several colored pen highlighters for different codes. I repeated that process for all transcripts. Once the initial coding process was completed, I uploaded the transcripts to NVivo to assist with the creation and organization of the codes inside of NVivo and moved to focus coding. Focused coding is considered a second phase of coding that helps to reduce data by searching for repeated or significant codes to create categories.

In NVivo, I grouped smaller codes to form specific categories. Once I finalized the categories, I juxtaposed those categories with the emailed documents that related to the technology adoption of the Blackboard LMS. Bazeley and Jackson (2013) noted that NVivo and other CAQDAS provide researchers the "ability to write memos, track ideas, index or code data with thematic or conceptual labels, add demographic or other categorical information for the purpose of comparing subgroups, run searches to examine constellations or patterns, develop visual models or charts, and generate reports or output from the data" (p. 3). Even though this was a small qualitative case study, NVivo worked well in conjunction with the traditional data coding process to help manage and organize the data corpus. NVivo uses the terminology node instead of code to "reference coded text" (Bazeley & Jackson, 2013, p. 17). Each node represents a particular concept, topic, or category from the data. Figure 2 shows the nodes that were created in NVivo for this study that assisted in the management of the data and organization of my ideas.
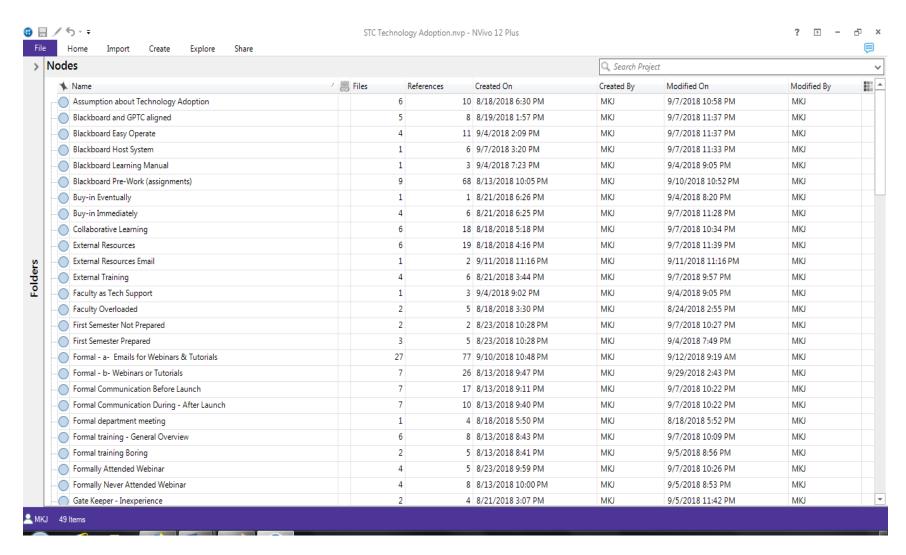
Figure 2 NVivo Coding Categories

Document Analysis

Holistic coding which is also known as macro-level coding, was used to help analyze the documents that pertained to the scheduled Blackboard learning webinars. A holistic coding strategy allows a researcher to assign one distinct code to a large unit of data rather than line-by-line coding (Saldaña, 2016). I began document analysis while waiting to schedule interviews with participants and continued after the interviews were completed. I reviewed seventy-seven emails that were sent to faculty members from the Online Administrator that announced scheduled Blackboard learning webinars. I organized the documents into two main categories: formal learning and informal learning. The formal learning documents were emails that promoted face-to-face learning sessions on STC campuses that could also be viewed through Blackboard Collaborative Learning telecommunications software. In the emails, the Online Administrator would provide a link for faculty members to access the sessions. The informal learning email documents provided faculty members links to watch pre-recorded videos about specific topics at their convenience.

Holistic coding is suitable for a qualitative study when the researcher is thoroughly knowledgeable of the data and wants to lump because of bound parameters such as time, location, and content (Saldaña, 2016).   Holistic coding was used to lump all the Blackboard LMS email documents into one code which was titled Formal A (see Figure 2), and the documents were arranged by dates when they were emailed to faculty members to show how frequent formal communication was provided to them between 2015 thru 2017 about the transition process and updates of the Blackboard LMS. Also, the documents were sorted to show the number of formal learning email documents and informal learning email documents.

Reflective Journal

A reflective journal includes any comments, ideas, or writings that a researcher does in relationship to a qualitative research study (Maxwell, 2013). The reflective journal is considered to be the author's experiences, plan of action for an interview, marginal comments on a transcript, theoretical ideas, and personal notes of the progress of the study (Bogdan & Biklen, 2007). Qualitative researchers are encouraged to write analytic memos in the reflective journal from the beginning of a study to the end of data collection (Maxwell, 2013). I maintained a reflective journal to record my thoughts before and after each interview. The first interview was very informative because it prompted me to add additional questions to the interview guide. Subsequently, following each interview, I would be recursive in the practice that compelled me to further modify the interview guide because of new revelations from the participant. The reflective journal was used alongside the constant comparative methods during the data analysis process to assist in the development of the themes for this study.

Trustworthiness

In qualitative research, a benchmark for quality inquiry is to show the trustworthiness of the inquiry (Saldaña, 2011). The term trustworthiness in qualitative research means for the researcher to convince the reader(s) that the findings of a study are credible by explaining the research process in-depth (Saldaña, 2011; Yin, 2011). Merriam (1998) noted that researchers need to ensure their qualitative studies have been conducted ethically by confirming the trustworthiness in the final report. Qualitative researchers' final reports should be authentic and explicit as possible (Yin, 2011). Thus, trustworthiness in qualitative research can be explained

through four components: credibility, dependability, transferability, and confirmability (Lincoln & Guba, 1985).

Credibility

Credibility can be achieved through rigorous methods of three elements: (a) triangulation, (b) detailed subjectivity statement, and (c) member checks by participants (Patton, 2002). First, rigorous methods are when the researcher makes certain that the data collected is synthesized to yield high-quality data (Patton, 2002). Triangulation is the use of multiple sources to investigate a phenomenon (Patton, 2002). This study used semi-structured interviews, document analysis, and observational memos to achieve triangulation. Semi-structured interviews were chosen because they allowed faculty members to explain their personal and collaborative experiences. The semi-structured interviews were conducted separately and cross-referenced using the constant comparative method with other coding strategies for similarities and differences.

Document analysis was selected because this method allowed more insight into the contextual information sent to faculty members before and during the technology adoption process. The document analysis was lumped into the holistic code Formal A that synthesized the general meaning of the emailed documents sent to faculty members and then cross-referenced to their discourse. For example, six faculty members indicated that formal learning webinars were not offered to faculty members at convenient times for them to attend. I reviewed the 77 email documents to learn of the times that were offered to faculty members and compared the times to the working hours of the full-time and adjunct faculty members. This comparison helped me understand faculty members' perspective about the formal learning webinars not offered at convenient times for them.

The last data collection method was a reflective journal that included observational memos from the interviews.   Qualitative researchers need to take ownership and be reflective of their beliefs to show authenticity and honesty (Patton, 2002). I maintained a reflective journal that consisted of my thoughts about the theoretical frameworks that were used for I pondered if STC was a good research site for this study, would faculty members participate, was the interview guide well developed, and were the coding strategies sufficient to create categories that would result into themes.

The researcher's credibility is also established by acknowledging one's predispositions in an explicit manner (Patton, 2002). The researcher should do a critical self-examination of his or her role in the data collection process of the study to show his or her predispositions to the reader (Creswell, 2009).   A detailed subjectivity statement will be presented in the last section of this chapter that will explain my perspective about this study.   Moreover, to ensure that my predispositions did not influence the study, I conducted member checks with the participants.

Member checks were done to prove the credibility of this study. Member checks can be done by allowing participants to evaluate all or parts of the finished product such as the case analysis, findings, or themes of the study for accuracy (Creswell, 2009). The researcher needs to give time for the participants to review and provide feedback about the researcher's final product. Participants in this study were allowed to review the entire final write up of the findings. Each participant was given their pseudonym to check their profiles for accuracy and clarity of their quotes within the themes of the findings. All participants expressed their acceptance of their profiles and use of quotes that were attached to each theme. The participants communicated their appreciation for being part of the study.

Dependability

Dependability refers to how well the researcher documented the research study steps where the study could be replicated through another study (Lincoln & Guba, 1985). It is imperative for the researcher to "provide details and thorough explanations of how the data were collected and analyzed, providing what is known as an audit trail" (Bloomberg & Volpe, 2016, p. 163). Qualitative researchers can make it known to other researchers that their data is available for review to show the authenticity of the research inquiry (Creswell, 2005). In this study, I provided details in the sample selection, data collection, and data analysis on how this research study was conducted that illustrates an audit trail that can be validated by readers.

Transferability

Transferability in qualitative research means the findings of one study can apply to another study or setting (Lincoln & Guba, 1985). The researcher must present a detailed description of the background of the study to give the reader a realistic picture of the study. The reader of the study should make a judgment whether similar processes of a study would be related to the reader's setting by understanding in depth what occurred at the research site (Bloomberg & Volpe, 2016). In this case study design, I provide a description of the case and findings that are connected to the theoretical framework for a reader to determine if some similarities and dissimilarities can be replicated in a comparable environment.

Confirmability

Confirmability relates to the viewpoint of objectivity in qualitative research, not the researcher's subjectivity (Lincoln & Guba, 1985). Qualitative researchers should "realize the futility of attempting to achieve objectivity; they must nevertheless be reflexive and illustrate how their data can be traced back to its origin" (Bloomberg & Volpe, 2016, p. 177). Qualitative

researchers aim to add to the literature and not to be judgemental about a setting or situation (Bogdan & Biklen, 2007). I have shown confirmability of this study through a reflective journal, observational memos, and a subjectivity statement.

Researcher Subjectivity

A subjectivity statement is a succinct biography of the researchers and the relationship they have with what and who is being studied (Preissle, 2008). The purpose of a subjectivity statement is for researchers to identify personal viewpoints, experiences, beliefs, cultural biases, and career-related predispositions (Preissle, 2008) about the construct of the study. For this study, I am influenced by the interpretive paradigm and social constructivist theory to investigate the phenomenon (Cranton & Merriam, 2015; Vygotsky, 1978). I am transparent about my relationship with STC and the faculty members that participated in this study. I believe that people can have unique and similar experiences when involved in the same situation or environment.

Subjectivity

I have taught for 13 years at the community college level at two different institutions. I have experienced two technology adoptions in my professional academic career, one as a student and the other as a faculty member at a different college and both experiences were different. The experiences were different because my roles at the institutions were distinctively different. As a student, I know what it is like to rely on your professor for help to use an LMS. In my personal experience, I found that the professor was useless for help on how to operate the system. In those instances, I relied on my peers and technical support for assistance. As an instructor, I know that I hold an important leadership role because students at times will look to me for help with minor and major technical issues; therefore, I need to know how to operate some of the basic features

from the adult learner's view to assist them. For example, I have done a conference call with the student to give them step-by-step instructions to access, upload, and maneuver certain functions and features in an LMS.   More importantly, I need to know how to upload instructional materials and maintain all student grades within the LMS.

I chose this topic to examine faculty members' learning experiences because of the pleasant and unpleasant experiences I encountered and wondered if other instructors shared my same experience. I chose STC because I had access to the institution and wanted to hear from the faculty members that went through the same process. I have worked at STC as an adjunct instructor in the School of Business and Computer Information Systems for four years. At STC, I have taught traditional face-to-face classes, online classes, and hybrid classes. When I started working there, the college used the Angel LMS. The Angel LMS was an intricate system for me to learn. I did not have any formal learning classes to learn how to operate the system. I was emailed a manual, videos, and tutorials on how to operate the Angel LMS.   In addition to using the Angel LMS, I had to learn how to operate Banner that stored students' personal information and other departments such as financial aid, admissions, and the registrar office used that system. The Banner Web system stored student grades and faculty, registrar office, and selected administrators had access to that system.

As I began to conceptualize the topic for this study, I researched the literature and found a multitude of studies about student experiences with a technology adoption, but few studies examined faculty formal and informal learning experiences of a technology adoption of an LMS. Moreover, the few studies I did find, the majority of the studies were conducted at four-year universities, and a minor number of studies were conducted at technical colleges. The majority of the research studies were quantitative studies and none of them "*solely*" addressed the process

of how faculty members learned to operate an LMS. Thus, I recognized there was a gap in the literature; and that revelation inspired me to develop the purpose and research questions for this qualitative inquiry.

I approached this study seeking to learn how other faculty members experienced the technology adoption. I have adopted a constructivist/interpretive view, which is the reason for the learning theories chosen for the theoretical frameworks for this study. When I decided on the criteria for faculty inclusion, I wanted to attract a diverse population to gain in-depth knowledge on how other schools within STC prepared their faculty members for the technology adoption. For the past two years, I have taught exclusively online; hence, I only interact with other faculty members through email and telephone. I seldom have to drive to STC campus except for a quarterly adjunct meeting that is not mandatory to attend. I do not know any other adjunct faculty members, and I only know two other full-time employees that I interact with, one in the school where I work and another in a different school that I met when I started working there. Of the eight participants interviewed, I was acquainted with one Gatekeeper, and I did not know the other seven participants. The interviews went smoothly because I tried to make each participant feel at ease during the interview and I reassured them that all names in the interview would be kept confidential.

During the transition of the Blackboard LMS, I experienced the same formal learning process as the eight participants. We were given at least one four-hour formal learning meeting and pre-course assignments to be completed within 30 days before the Blackboard LMS launch in fall semester of 2016. I completed the pre-course assignments for the Blackboard LMS while still teaching in the Angel LMS. From my perspective, the pre-course assignments were informative, but it was a lot of work to complete in 30 days while working a full-time job.

Bogdan and Biklen (2007) noted, "qualitative researchers tend to believe that situations are complex, so they attempt to portray many dimensions rather than to narrow the field" (p. 38). My opinion about the pre-course assignments was my experience, and I strived to capture each participant's experience that would show various viewpoints of that required task.

During the pre-course assignments, we were required to view Blackboard learning videos. Some of the learning videos provided to faculty from the Online Administrator did not match the exclusively designed Blackboard system for GTPC; the training videos were for generic usage. At that point, I realized I would have to figure out how to use the Blackboard LMS for myself. I began to wonder if other faculty members had the same uneasiness that I experienced prior to teaching that first semester in the Blackboard LMS. As the academic year progressed, more problems occurred with the Blackboard LMS that faculty did not know how to resolve and may have taken some time for the Online Administrator to find a resolution.

I had experiences with using the Blackboard LMS but through a different college that had a different instructional design and features. I self-consciously believed I was on my own in learning the Blackboard LMS because technical support had limited hours of operation and I only knew one person to call for assistance. Bogdan and Biklen (2007) stated that a researcher could share his or her feelings about a situation to help the participants feel more at ease to open up and to gauge the participants' perspectives. I asked the participants about their informal learning experiences and provided my perspective for the clarity of the question. Once the participants understood the question, they began to share their feelings about independently learning the Blackboard LMS. Thus, this study is to inform higher education administrators about faculty members' learning experiences of a technology adoption where the findings will contribute to an understanding of deficiencies in the implementation process of a new LMS.

Chapter Summary

The study used a qualitative case study to examine faculty members that experienced a technology adoption of the Blackboard LMS at STC. This chapter provided the details for the design of the study, sample selection for using the research site, and the criteria for participants. In addition, the chapter described the data collection method for the semi-structured interviews, document analysis, observational memos, and data analysis strategies. Lastly, this chapter clarified the trustworthiness of the study and the researcher's subjectivities.

CHAPTER 4

PARTICIPANT PROFILES

The purpose of this study was to examine the learning experiences of faculty at a state technical college who were required to participate in a new technology adoption of the Blackboard Learning Management System (LMS). Two research questions guided this study:

1. What were the common learning experiences of faculty participating in the adoption of a new learning management system?

2. How did the participating faculty navigate the requirement to learn or adapt to a new system?

In this chapter, I will provide demographics about faculty at the research site, a profile for the participants to allow insight into their professional employment history and current position with STC. Then, this chapter will conclude with a summary.

There were eight participants in this qualitative case study, and all were females between the ages of 36 to 55. Of the eight participants, three were full-time faculty members, referred to as Gatekeepers in this study. STC added the Gatekeeper title for full-time faculty employees during the technology adoption of the Blackboard LMS. The purpose of Gatekeepers is to establish uniformity in the course design of the Blackboard LMS classrooms for other faculty and students. STC has different curriculum programs for each school and Gatekeepers design the Blackboard LMS classrooms differently for those schools' specific curriculum programs. Gatekeepers are responsible for registering students into classes and uploading all instructional materials such as course calendars, discussion board questions, quizzes, and tests. Gatekeepers

are required to teach five courses in a school calendar year that occurs between mid-August through early May and three classes during the summer semester that occurs between late May through July.

The other five participants were adjunct faculty from three different schools. Adjunct faculty members are people that teach part-time at STC and work for other higher education institutions or with another organization. Adjunct faculty members are allowed to teach four classes in a school calendar and two classes during the summer semester. Each school has a different number of full-time faculty and adjunct faculty. For example, I learned that the School of Health & Professional Services has only one adjunct faculty and has five full-time employees. The School of Business & Computer Information Systems has ten adjunct faculty members and four full-time employees. Prior to the technology adoption of the Blackboard LMS full-time faculty and adjunct faculty members had complete control over the design of their classes. Since the technology adoption, adjunct faculty members have limited authority to make changes in their Blackboard LMS classrooms and must maintain the uniformity by the full-time faculty assigned to their classes. Full-time faculty members have authority to make any changes with the classes they are assigned to within their school's Blackboard LMS.

During the interviews, I discovered that one of the eight participants had no prior experience with an LMS outside of her usage through STC. The remaining seven participants had experience using an LMS either as a graduate student or as a faculty member with another college. Three full-time faculty members and one adjunct faculty member hold master's degrees, and six adjunct faculty members hold doctoral degrees. Pseudonyms were used for all participants and any other persons mentioned in the interviews. Table 6 provides an overview of

the participants, their job position, number of years teaching at STC, gender, age, experienced a

technology adoption, and the method used to interview them.

Table 6

Participants Overview

Name of Participants (Pseudonym)	Position	Years worked at STC	Gender	AGE	Experienced with a Technology Adoption	School	Type of Interview
Daisy	Full-Time Gatekeeper	5	Female	47	No	Business & Computer Information Systems	Face-to-Face
Edith	Full-Time Gatekeeper	5	Female	41	No	Health & Professional Services	Telephone
Ava	Full-Time Gatekeeper	10 +	Female	47	Yes	Business & Computer Information Systems	Face-to-Face
Anna	Adjunct	10 +	Female	53	Yes	Business & Computer Information Systems	Telephone
Sarah	Adjunct	3	Female	49	No	Business & Computer Information Systems	Telephone
Oliva	Adjunct	3	Female	36	No	Business & Computer Information Systems	Telephone
Ola	Adjunct	10+	Female	48	Yes	Arts & Sciences and Learning Support	Telephone
Rita	Adjunct	5	Female	55	Yes	Business & Computer Information Systems	Telephone

Daisy

Daisy has worked as a full-time employee/Program Director/Gatekeeper in the School of Business & Computer Information Systems at STC. Her interview was conducted face-to-face in her office on Tuesday, June 19, 2018, at 11:30 am. She emailed me a signed consent form six days earlier. I arrived 10 minutes early, and she indicated that she was there working on various student matters. She offered me a seat in her office until she finished her tasks. Her office is decorated with her academic degrees, pictures with students, two sitting chairs, and a bookshelf that is full of various business books. She has an inside corner office without windows, and her office desk is well organized. On this interview day, she is dressed in a khaki colored blazer and skirt outfit, with long black hair, and a bright smile.   Once she finished her tasks, the interview began.

Daisy is a forty-seven-year-old African American woman that has worked for STC for more than five years. As a program director / Gatekeeper, Daisy creates the School of Business & Computer Information Systems course schedule for students each semester, supervises ten adjunct faculty members, scheduler for full-time and adjunct faculty for course assignments. Prior to her full-time position with STC, she worked in retail management and merchandising fields. She earned her bachelors and master's degrees through the traditional approach of face-to-face learning because online learning did not exist when she attended college.   She expressed how she enjoys teaching adult learners how to manage people and market products.   STC is the only school she has worked as a college instructor. At STC, she mainly teaches hybrid and online classes. Her only point of reference in using an LMS is with STC, and she has never experienced a technology adoption of LMS with an institution or with any of the private organizations where she worked.

According to Daisy, the technology adoption process of the Blackboard LMS was a challenging experience for her. Daisy was very familiar and confident in using the Angel LMS and did not have immediate buy-in to the transition process of the Blackboard LMS. When interviewed, she expressed that the Blackboard system seemed complex because the process of using the system was not similar to the Angel LMS. As a Gatekeeper, she felt overwhelmed with learning the Blackboard LMS features, maintaining her job duties, managing adjunct faculty members, and attending to students' needs. She believed that faculty should have been given release time from their regular job duties to focus on learning the Blackboard LMS. Daisy noted that she was not confident in using the Blackboard LMS the first semester it was launched. Her confidence was developed from her self-directed learning initiative and collaborative learning efforts with her colleagues.

Edith

Edith has worked as a full-time employee / Gatekeeper in the School of Health and Professional Services for over five years. At her request, she chose a telephone interview because that interview method would be convenient for her since she works between two campuses. Edith's interview was scheduled for Friday, June 22, 2018, at 11:15 am, and she emailed me her consent form nine days earlier. When I telephoned her to conduct the interview, she promptly answered, and we exchanged formal greetings to each other. As I listened to her talk, I could tell that she was a Caucasian female with a friendly personality and eager to share her experience about the technology adoption of the Blackboard LMS. She indicated to me that she was currently in graduate school working towards a master's degree in nursing education and the program was entirely online.

Edith worked as a charge nurse for 13 years before joining STC as a college instructor. When Edith obtained her first degree, she matriculated through the traditional face-to-face method because the online learning concept was nonexistent. Her initial encounter with an LMS was through STC with the Angel LMS. She does not teach at any other higher education institutions and mainly teaches the traditional face-to-face classes at STC. She expressed that she now has a student perspective on using an LMS because the nursing graduate program, where she attends is entirely online and when she is preparing instructional materials for her classes, she considers scenarios that her students may encounter. She recognizes that online learning can be a challenge for some students and that an LMS needs to be user-friendly to help students navigate the system and for faculty members to operate.

Edith is one of four Gatekeepers that build master classes with all instructional content for other instructors in the School of Health and Professional Services. There is only one adjunct faculty member in the School of Health and Professional Services, and all other faculty members are full-time employees. Edith was tasked during the technology adoption to be the point person in the School of Health and Professional Services to assist the other three Gatekeepers and adjunct faculty members with learning the Blackboard LMS. She felt prepared to teach the first-semester the Blackboard LMS was launched because she was the Gatekeeper to transfer all curriculum content from the Angel LMS to the Blackboard LMS. The curriculum content process of moving each course content from the Angel LMS to the Blackboard LMS allowed her to learn the different features of the Blackboard LMS. She had immediate buy-in to the Blackboard LMS because of her responsibility to transfer the content and was very interested to see how the Blackboard LMS worked.

Edith noted that she used a great deal of her time to learn how to operate and manage the Blackboard LMS. She was not familiar with the Blackboard LMS and realized for her to assist the other nursing faculty members she would need to start experimenting with the Blackboard LMS features. She knew the nursing faculty members were counting on her to be their support person during the launch of the Blackboard LMS. During the first semester of using the Blackboard LMS, she relied on the other three faculty members, online administrator, formal video recordings of Blackboard webinars, and the internet to assist her with the various challenges that she experienced. She did not contact faculty members in other schools for assistance because each school has a different curriculum that uses different Blackboard LMS features.

Ava

Ava has worked in the School of Business & Computer Information Systems at STC for over ten years as a full-time employee / Program Director / Gatekeeper. Her interview was scheduled in her office at STC for Monday, June 18, 2018, at 11 am. I arrived five minutes early, and Ava was walking towards her office from a colleague's office. As she approached her office, she acknowledged me with a smile saying and saying good morning. Once, she unlocked her door; she welcomed me into her office to take a seat. Her office is an inside office without a window with burgundy colored painted walls. In her office, she as a bookshelf that is decorated with pictures of her family, former students, awards, plaques of motivational statements, books, and two chairs. On her desk, there were papers in an organized stack at the corner and a gray thermal drinking container. She is an African American woman that is forty-seven years old with a black curly short hairstyle and stands around five-feet-seven. She is dressed in a navy and

white flowered summer dress with a navy three-quartered length cardigan. Once we sat in our respective seats, she handed me the signed consent form, and the face-to-face interview began.

Ava is a doctoral student, and the majority of her classes are hybrid classes and online classes because the university is located out of the State of Georgia. She had previous experience with the Blackboard LMS as a student when she was working towards her master's degree. She noted that the Blackboard LMS create for STC has a different design from the institution where she matriculated for her master's degree. She teaches at other universities, some of those institutions use Blackboard LMS, and the design of each online classroom was different. She also noted that the formal training to learn to operate the Blackboard LMS for faculty and students at those other institutions were more informative than what has been offered to STC faculty members.

Ava has experienced two technology adoptions with STC. The first technology adoption was seven years earlier when STC transition from an older version of the Blackboard LMS to the Angel LMS. Her second experience with a technology adoption is the transition back to the Blackboard LMS, which is the phenomenon being examined in this qualitative research case study. During the interview, she stated that the first technology adoption to the Angel LMS was not a good experience because the steps for the transition process was not properly communicated and there was no formal learning at that time for faculty. She noticed for the second technology adoption that the Online Director and Online Administrator communicated more about the transition but the formal learning to educate faculty members on how to operate the Blackboard LMS still lacked depth. She indicated that faculty members were expected to teach themselves how to operate the Blackboard LMS

Ava expressed her frustration that Gatekeepers were overloaded during the technology adoption of the Blackboard LMS. She revealed that she did some research about the topic of technology adoptions and some higher education institutions offered their faculty members release time of their regular job duties to allow them time to learn the LMS. She stated that full-time faculty members should have initially been given that opportunity, which could have prevented many of the problems that plague the LMS transition in the beginning. Ava believed that faculty members should have been more involved with the initial technology adoption process than a selected few faculty members.

Anna

Anna has been employed with STC for over ten years as an adjunct faculty instructor in the School of Business & Computer Information Systems.   At her request, she chose to do a telephone interview that occurred on Tuesday, June 19, 2018, at 7 pm. Anna selected that time of day because she works a full-time job at a private organization and teaches at other universities. She wanted the interview to last no longer than an hour because she scheduled several conference calls with her students later that evening.   She emailed the consent form with her signature the day before the interview, and the interview began on time. Anne is an African American woman that is fifty-three years old that holds a Ph.D. in educational leadership. She has a raspy voice that was friendly and candid with words. She indicated that my study seemed interesting and she wanted to contribute her experiences of the technology adoption process.

At STC, she has taught in the traditional face-to-face class, online class, and hybrid class. She prefers the hybrid class because that teaching format allows the student to have personal interaction with the professor to ask questions that might otherwise be misinterpreted through a strictly online class format and enough flexibility for the student work independently.   She has

taught at other higher education institutions and has learned to operate other LMSs.   She noted

that her other employer, a higher education institution prepared her better to operate its LMS by

offering several formal learning sessions, webinars conducted by its main office, and technical

support around the clock to help resolve faculty problems.

Anna posits that adjunct faculty members do not have the same level of support as full-

time faculty members. She expressed that the formal learning webinars for the Blackboard LMS

were offered during the day when she was working at her full-time job. She stated that technical

support hours are banker's hours from eight am to six pm Monday through Thursday. She noted

that in the ten plus years of teaching at STC she knows two other adjunct faculty members

because they taught in adjacent classrooms for a semester when she taught a face-to-face class

eleven years ago. She has taught now for over five years strictly online and does not interact with

other faculty members except for the Gatekeeper within the school where she teaches. She

expressed her concern that adjunct faculty members do not have the same availability of

resources to them compared to Gatekeepers. She stated, adjunct faculty members only interact

with each other once a semester at the adjunct formal meeting compared to full-time faculty that

have daily interaction, limited technical support in evening for faculty members that cannot

contact technical support during the day, and the formal learning webinars for the Blackboard

LMS was not offered during nonconventional hours.

Anna was familiar with the Blackboard LMS because she used that LMS when she

matriculated for her master's and doctoral degrees; however, the design was different from the

Blackboard LMS at STC. She worked for STC during its first technology adoption from the

Blackboard LMS to the Angel LMS. She also experienced the second technology adoption with

STC when it transitioned from the Angel LMS back to an updated version of the Blackboard

LMS. She described the second technology adoption process at STC as a challenge to learn how to operate the Blackboard LMS. In her voice, the long sighs expressed her frustration about the technology adoption process. She expressed that STC online administrators did inform faculty members that there was going to be a transition but did not adequately train faculty through formal learning methods that would properly prepare them to teach their classes. Anna had many complaints about the technology adoption and indicated that she still had questions at the time of the interview about certain features.

Sarah

Sarah has worked three years as an adjunct faculty instructor in the School of Business & Computer Information Systems at STC. She requested to do a telephone interview on Monday, June 18, 2018, at 7:30 pm and emailed the consent form before the interview. The day of the interview, Sarah initiated the call sounding enthusiastic with a mild tone of voice ready to share her experiences about the technology adoption of the Blackboard LMS. She is an African American female that is forty-nine years of age. She holds a Ph.D. in psychology and works full-time at a private organization. At STC, she primarily teaches online classes and does not work for other higher education institutions.

Sarah's first-semester teaching at STC was the same semester the Blackboard LMS was launched.   She mentioned that the formal learning activities were informative and she mainly relied on the prior knowledge she received from using different LMSs in the doctoral program where she matriculated to help her navigate the Blackboard LMS. She felt well prepared in using the Blackboard LMS the first semester it was launched. She expressed that the Blackboard LMS was easy to learn and she did not receive many complaints from students on how to operate the system. She noted that the level of formal communication to faculty was sufficient for her to

understand the process of the technology adoption. Her biggest concern was using McGraw Hill Connect an online learning platform that is linked to the Blackboard LMS for students to complete course assignments. She needed formal learning to use that learning platform to assist students with their assignments. In her interview, she did not have many negative complaints about the technology adoption.

Oliva

Oliva has worked at STC for three years as an adjunct faculty instructor in the School of Business & Computer Information Systems. She scheduled a telephone interview for Friday, June 22, 2018, at 7 pm. Oliva emailed the signed consent form 30 minutes before the interview began. I initiated the call, and she answered speaking in a jovial high-pitch voice. Oliva is a thirty-six-year-old African American woman that holds a DBA. She is a stay-at-home mom that works part-time and primarily teaches online classes at STC. She prefers to teach hybrid classes because she can frequently interact face-to-face with the students to further explain a lesson and answer their questions. She noted that her knowledge to use an LMS was through the two graduate programs where she matriculated for masters and doctoral programs and with other higher education institutions where she taught. She expressed that those previous learning experiences with different LMSs helped her navigate the Blackboard LMS at STC.

Oliva stated, at the beginning of the technology adoption, the level of formal communication about the transition was high and then decreased after the launch. She felt prepared to teach in the Blackboard LMS the first semester it was launched because she was a fairly new graduate of a doctoral program and she relied on her instincts to learn the features of the Blackboard LMS. She was uncertain about the McGraw-Hill Connect platform that is linked in the Blackboard classroom. She noted that there was no training on the McGraw-Hill Connect

platform and felt puzzled in trying to understand that system and how it was used with the

Blackboard LMS. She relied on the Gatekeeper for her school and McGraw-Hill representative

to assist her in operating that learning platform.

Ola

Ola has been teaching in higher education for over 30 years. She has worked ten years as

an adjunct Math faculty instructor in the School of Arts & Sciences and Learning Support at

STC. Ola chose to do a telephone interview on Wednesday, June 20, 2018, at 1 pm because she

lives out of state. She emailed a signed consent form fifteen minutes before the interview began.

I called Ola, and she answered in a cheerful moderate tone of voice. She is an African American

woman that is forty-eight years old. She works full-time as the Blackboard LMS Administrator

at another university. Additionally, she teaches online at another university that uses a different

LMS, and the doctoral program where she is enrolled uses the Blackboard LMS in a different

format. She indicated that her current job responsibilities and teaching experiences at other

higher education institutions helped her understand the Blackboard LMS format designed for

STC.

Ola teaches entirely online and only uses the Blackboard LMS as a host system to send

college and classroom announcements, record grades, and provide instructions for links that will

direct students to another learning platform where the students will do the work. Ola stated that

all math assignments are completed in EducoSoft or MyLabMath, which are learning platforms

that many colleges and K-12 schools use to teach students core subjects such as Math, English,

Reading, and Science. She does not use the Blackboard LMS to teach; she uses it to

communicate with the students and record grades. She noted that formal learning was needed for

Educosoft and MyLabMath for those are the learning platforms that students used to complete

their course assignments, not the Blackboard LMS. When I compared her interview with the other interviews, I learned that each school has a different purpose of using the Blackboard LMS.

Rita

Rita has worked five years as an adjunct faculty instructor in the School of Business & Computer Information Systems at STC. She chose to have a telephone interview and scheduled it for Tuesday, July 10, 2018, at 1 pm. She emailed the signed consent form ten minutes before the interview began. I called her, and she answered with a profound pleasant voice. Rita is a fifty-five-year-old African American woman that holds a D.B.A. in management. She is retired and has a work history that spans over thirty years with a private organization. She teaches at several other universities in their online educational programs. At STC, she mainly teaches face-to-face and some hybrid classes on Saturday mornings. She experienced technology adoptions with other higher education institutions that used different LMSs and with a different format of the Blackboard LMS.

During the interview, Rita noted that the formal learning activities should have been more in depth to prepare faculty members to use the Blackboard LMS. As she spoke, I could hear the frustrations she experienced when using the Blackboard LMS that first semester. She expressed that she relied on her previous experiences with the Blackboard LMS and her intuition to help her operate the system. If she did not have the notes about the Blackboard LMS from other institutions to help her figure out the system, she would have been lost. She did contact the Online Administrator and technical support for assistance to help her manage the Blackboard LMS because her the notes for the Blackboard LMS from previous institutions were limited to that particular institution's design of Blackboard.

Chapter Summary

This chapter provided clarification about the demographics of STC, an overview of the participants' backgrounds and their experiences that related to the context of this study. Each participant's profile described a unique path on how the faculty member learned to facilitate and use instructional materials in her classroom before and during the STC technology adoption of the Blackboard LMS. The narratives explained each participant's previous experience with using an LMS while either working for another higher education institution, in the course of graduate school matriculation, or with the old LMS with STC. Those unique experiences are what shaped each participant's constructivist lens about the technology adoption process of the Blackboard LMS.

CHAPTER 5

FINDINGS

The purpose of this study was to examine the learning experiences of faculty at a state

technical college who were required to participate in a new technology adoption of the

Blackboard Learning Management System (LMS). Two research questions guided this study:

1. What were the common learning experiences of faculty participating in the adoption of a

    new learning management system?

2. How did the participating faculty navigate the requirement to learn or adapt to a new

    system?

In this chapter, I present the findings from this qualitative case study. The constant comparative

method was used to analyze the eight semi-structured interviews and seventy-seven emailed

documents that were relevant to the technology adoption of the Blackboard LMS. This chapter

begins with a chart that illustrates the connection of the themes to the two research questions that

guided this study. Next, I will present the themes with in-depth narratives from the eight

participants. Lastly, I will conclude with a chapter summary.

In my review of the semi-structured interviews and email documents that corresponded to

the technology adoption of the Blackboard LMS four themes emerged: (a) Training occurred

without stakeholders input, (b) Training was informative and burdensome to participants, (c)

Participants underutilized training sessions, and (d) Participants designed their own learning

experiences.

Table 7 illustrates the relationship between the five themes to the two research questions that guided this study.

Table 7 Overview of Themes and Sub-Themes

Themes	Sub-Themes
I. Training occurred without stakeholders input.	
II. Training was informative and burdensome to participants.	
III. Participants underutilized training sessions.	·Pre-scheduled webinars were offered and only a few attended
	·Pre-recorded webinars and tutorials were seldom watched
IV. Participants designed their own learning experiences.	· Independent Learning
	· Collaborative Learning

The four themes and eight sub-themes were key distinctions that help conceptualize the eight participants' viewpoints about their common learning experiences and how they navigated the Blackboard LMS. According to Bogdan and Biklen (2008), themes emerge when researchers recognize signal trends, master concepts, or key distinctions from the data. The theoretical frameworks in this study also help shape the themes for this study. Theoretical frameworks assist in conceptualizing the inquiry to undergird the research process (Merriam, 1998).

Theme 1: Training occurred without stakeholders input

The first common learning experience uncovered from the interview data was the first learning meeting that all faculty members had to attend. Faculty members perceived the first learning meeting as a basic overview. Faculty members that participated in the first scheduled

learning meeting for the Blackboard LMS expressed their opinions about the scheduled meeting. Five of the faculty members voiced dissatisfaction with the first scheduled meeting, and three faculty members expressed their satisfaction with that first learning meeting. The five faculty members that were disappointed explained that the first learning meeting was not in-depth enough to provide them with the hands-on training they needed to learn how to operate the Blackboard features.

Ava has years of experience in using a different version of the Blackboard LMS and other LMSs as a faculty member at other universities and as a student. Her LMS experience helped her to recognize that the STC first learning meeting for the Blackboard LMS restricted faculty in using certain features. Her voice projected frustration because she wanted hands-on-training; instead, she states they received basic information. Ava expressed:

> It was disappointing; it was frustrating. Certain things the facilitator talked about in Blackboard, we couldn't see it, and if I'm going to do something, I am going to need to do it as we're talking about it so that it makes sense to me because we were so used to Angel then. It was just foreign to me, the different things we were doing in Blackboard. Time was spent on things that were never going to be utilized in Blackboard versus things that we were really going to need. I think it negatively impacted us. To an extent, it gave me an overview, and I knew that I was in for some work and that I knew some things that stuck with me that may not have stuck with someone else.

Daisy's opinion of the first learning meeting was similar to Ava's viewpoint. During Daisy's face-to-face interview, she would shake her head and chuckle with disappointment when she spoke about the first learning meeting. Her non-verbal communication displayed dissatisfaction about the first learning meeting for the Blackboard LMS. Daisy stated:

I can distinctly remember the lady who taught it, and I was like wow; watching her was like watching paint dry, I mean she was so boring. The examples she used were for, you know for basket weaving 101. I could not really relate to what she was saying. You know how to do this or that. You know how to transfer information from the Angel courses into Blackboard if that makes sense. I guess I learned the basics.

Anna's viewpoint about the first learning meeting was similar to what other faculty members experienced. Anna's opinion was similar to others, and she expressed her frustration that the steps in the first learning meeting did not match her encounter when she attempted the same steps at home:

It acquainted me with the form of Blackboard that we have now. But I found that I've had several questions, and I still have questions because what was in the tutorial versus what I encountered as the instructor it doesn't always work the same.

In Rita's interview, she rated the first learning meeting a five on a scale with ten as the highest number. She gasped and disdainfully chuckled as she explained her opinion about the initial first learning meeting. Rita expressed a different perspective:

I just thought it was too many people at the meeting. They had it in a big conference room for professors and what not. They kind of walked us through some things, and then, on your own, you had to get familiar with the entire Blackboard system. They kind of introduced it to you during an initial full-time, part-time faculty and staff meeting and for whoever would be using Blackboard. They did an initial thing so that everyone could attend. I would give the meeting a five rating. For me, that means the meeting was average. It didn't give me enough insight. It was just an introduction. It didn't give me in-depth knowledge, hands-on training, let me put it like that. Hands-on training to be

successful up front. To be honest with you, and I said this before, I found the long-drawn-out course training that we had to do, to be more time consuming than the classes. I don't feel it was fair for us as professors to have to come in for that meeting and not get paid for it. No, that was too much.

Ola's perspective on the first learning meeting was indifferent since she is the Blackboard LMS Administrator at the university where she works. In her telephone interview, she carried a pleasant monotone voice with no uttered gasps of disappointment like other faculty members when she spoke about the first learning meeting. She stated, "Well, the class, the training was not an actual training; it was an introduction." She did voice condescending laugher when she discussed the first learning meeting because the training that she needed was for the other different learning platforms that are used in conjunction with the Blackboard LMS for the School of Arts and Sciences. She also mentioned that she never received formal learning for the My-Math-Lab and Educosoft learning platforms that she uses to teach adult learners. Ola explained her viewpoint:

> The Blackboard system is a host system where we put the material for students to use or present a link for students to access the other learning platforms. I can actually create test and assignments in the Blackboard Learning environment, but it is not generated automatically based on the textbook. Now, My-Math-Lab and Educosoft, the two learning platforms that STC uses generate tests and assignments based on the textbook courses for each core subject. STC pays for a code that allows faculty members to access those two learning platforms for faculty to upload their instructional materials. So all of their homework, quizzes, tests, and final exams are locations in those learning platforms, not Blackboard.

Edith, Oliva, and Sarah were satisfied with the first learning meeting which differed from the other five participants. When Edith spoke, I could hear in her voice that she was pleased with the one-day first learning meeting and unbothered that faculty members were given just basic information about the Blackboard LMS. Edith's opinion was parallel to other faculty members; however, she did not criticize the meeting. Edith's comments were:

> The meeting covered just the basic navigation, basic procedures that instructors normally do in the learning management system and it was just to familiarize ourselves with the features of it. I had never seen Blackboard and to just get in there, see it, and actually use some of the functions. I guess the basic things that instructors do in a learning management system was covered. Doing it was the most helpful thing just getting in there clicking around and becoming familiar.

Oliva expressed the same opinion as Edith that the first learning meeting was basic and informative about the Blackboard LMS for STC. Oliva's perspective is different because she started working for STC the same semester the Blackboard LMS was launched. She never used the Angel LMS and received formal learning after two previous meetings for faculty, which allowed the online administrator to make instructional design adjustments in the formal meeting for new faculty. For Oliva, she was pleased with the meeting:

> It was very effective, um, We were able to ask questions through email about a topic that we didn't understand. If we got tripped up on something while we worked on the assignments, we were able to go back and refresh ourselves. And, they also gave us a booklet that we could use at home that also had step by step instructions, as well as have pictures of the frame of what your computer should look like. So we had those resources as well. When we started with Blackboard, they actually sent out a learning manual as

well.

Sarah started employment with STC the same semester the Blackboard LMS was launched. She was satisfied with the first learning meeting. She noted that her use of an LMS in her doctoral program provided her with simple basics that helped with the basic training provided to STC faculty members. She noted that the face-to-face meeting covered the basic functions of the Blackboard LMS. She stated, "The meeting covered things like the first walkthrough of the system on how to sign on and this is how you look at your discussion board and grades." As she spoke about the formal meeting, she did not grasp in despair but had a nonchalant voice tone that was pleased with the basic instructions.

Theme one of the findings showed how individual meaning making is dependent upon each faculty member's previous experience and perception about the first learning meeting, the person facilitating the meeting, and how STC began the implementation process of the technology adoption. As previously mentioned, five of the participants' shared pessimistic attitudes about the common learning experience of the first meeting that it was not informative enough to help them learn how to operate the features in the Blackboard LMS. The other three participants shared a different perspective. They conveyed that the first learning meeting was sufficient for them to learn the basic functions. As I used the constant comparative method to evaluate participants' perspectives, I found the major difference between faculty satisfactions or dissatisfactions with the new Blackboard LMS was the participant's years of experience with using the Angel LMS at STC. Faculty that used the Angel LMS for six years or more had the biggest challenge in learning how to operate the features compared to faculty that had five years or less. The comments from faculty members showed how eight people experienced the same formal learning initiative and left with different perspectives.

Theme 2: Training was informative and burdensome to participants

The second common learning experience that faculty members shared was the Blackboard pre-course assignment packet. The pre-course assignment packet was created by the STC Online Director and the Georgia Virtual Technical Connection (GVTC) facilitators to help faculty members learn how to operate and manage the Blackboard LMS. GVTC is a division in the TCSG that assists all State Technical Colleges with the technology adoption of the Blackboard LMS. Faculty members were required to complete the pre-course assignments packet before the 2016-spring semester launch of the Blackboard LMS.

Seven participants in this study believed the pre-course assignments packet helped them learn the Blackboard LMS. One participant did not remember completing the packet. The consensus from faculty members was that the pre-course assignments packet was a large volume to complete while working a full-time job whether at STC or for another organization. I also completed the Blackboard pre-course assignments packet while I worked a full-time job and found the assignments to be rigorous and tedious. The pre-course assignments packet was fifty pages with extensive activities that covered topics on how to build a class, create tabs on the course navigation menu, use the features on the control panel, add content to a course, customize a course, set-up the grade book, view the course through the student preview tab, set-up automatic grading for assignments, reviewed steps to create discussion board questions, create individual grade reports, class grade reports, and to evaluate student process.

Sarah and Ava expressed the difficulty in completing the pre-course assignments packet while working a full-time job. They also expressed in their comments that the pre-course assignments packet was helpful. Sarah spoke candidly about her experience:

It was very time-consuming. I was probably one of those that grumbled about it because

coming home every day from a full-time job to have to go through those assignments especially when they're already teaching you the system is very time-consuming, but I did find it very beneficial.

Ava acknowledged that this was her second technology adoption with STC, and she explained that the institution had done a better job this time around in providing faculty with training activities because the previous technology adoption that occurred eight years earlier was a disaster. She reaffirmed Sarah's comments that the pre-course assignments packet was vast, lengthy, and informative:

> We had to complete the pre-course assignments. It was very difficult learning the system trying to figure it out, getting your pre-work done and caring a full-load of not just teaching but we also advised students, served on committees, spearheaded events. So we're doing all of this, and at the end of the day the impact is to your students So, we would go in and kind of look around and figure out how to do different things in Blackboard. The pre-course assignments showed us how to set up the grade book, how to create a discussion, and how to create a quiz. The pre-course assignments helped with knowledge base compared to that one-day learning session.

Anna, a veteran faculty member also experienced the previous technology adoption with STC. She stated the previous transition was a terrible experience and this second transition was much better. She expressed that the pre-course assignments was helpful but still lacked accuracy in steps to use the features:

> Yes, it was helpful. It has to be somewhat frustrating at times because, here again, what you read did not match the actual steps to operate the features. I think sometimes people make the assumption, they jump ahead and they assume you know more. For someone

like me who definitely does not have access to ask questions in a timely manner or get a response in a timely manner. You can't assume a person knows it. Oh, we skipped this step from a-to-d versus a-b-c-d. So it became frustrating at times, and then you have to leave an email message to the support staff, then wait for them to call you back with an explanation or wait for someone to put out a little video message saying, we know several of you have encountered this problem, and this is what we were asking you to do this time to fix a certain thing. It just has to be kind of cumbersome because it was very long to go through all the lessons they wanted us to go through.

Edith praised the pre-course assignments packet and spoke highly of the Online Administrator for the creation of the pre-course assignments for faculty to complete before they could teach a course in Blackboard. In her interview, she boasted that she was a fast learner and tech-savvy and those skills helped her complete the Blackboard LMS pre-course assignments. Edith's view of the pre-course assignments packet was primarily complimentary:

The online administrator sent out to all the Gatekeepers and actually, all the faculty got it, the workbook with all the assignments. We were given that paper coursework to work on it. And we were given a deadline to get it done. I forget what she called it, it was like a packet, and she explained that this is what you have to do to get trained. Once I went through that one packet, I caught on to it pretty quickly. And, you know, the Online Administrator, she was available to answer any questions that we had. We had an opportunity to email her within the sandbox course where you completed the pre-course assignments. And I recalled that it was more than adequate for me

Ola, the Blackboard Administrator at a different institution, found the pre-course assignments packet to be beneficial. She noted that each institution could have a different

Blackboard LMS design and use different features. The pre-course assignments packet at STC

helped her to learn features that she did not use at her institution.

> For me, the Blackboard LMS pre-course work was effective. I went through the
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> Blackboard system training with another institution, and that training only taught me
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> definitions and minor stuff. I'm the Blackboard Administrator at my college right now,
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> and the pre-course assignments taught me how to use the features that I didn't learn at the
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> other institutions. So before when I was told that we had to take complete the work that
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> was fine. That eleven-step course taught me something that I didn't learn because before
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> it was trial and error.

Rita, a seasoned faculty member with the Blackboard LMS, did not finish the pre-course

assignments packet. She was displeased with the one-day first learning meeting and with the

pre-course assignments. Rita was blunt with her opinion of the packet:

> After that big meeting, we were required to sit down on our own and complete the long-
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> drawn-out assignments at your house. I didn't finish that training. I thought the training
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> was too much, and, I still do. I see it this way, just give me the basics of what I need to
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> know, the discussion boards, and pulling up the coursework. The five top things that I
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> need to know and that back end stuff I can get to that later. But, for the sake of my
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> classes, I needed to know the top things, and I was able to do that really with pretty much
>
> no help. If I ran into some issues, I would reach out to the Online Director or Gatekeeper.

In Oliva's interview, she expressed her approval of the pre-course assignments packet.

Oliva worked full-time at a private organization and completed the pre-course assignments in the

evening. I asked her were the pre-course assignments helpful. She responded in a concise

manner: "Yes it was; it was because it was a new system for everybody including the student, so

we were learning along with them." In Daisy's interview, she did not recall having completed the pre-course assignments packet.

Thus, it was evident that faculty members learned more about the Blackboard LMS from the pre-course assignments packet than from the first learning meeting. The pre-course assignments packet was a common learning experience that seven faculty members explicitly mentioned in their interviews that helped them to learn the features and functions of the Blackboard LMS. The seven participants also noted that the volume of that packet was too extensive to complete in the limited time given to them. It was unusual and unfortunate to hear that some faculty members rushed to meet the deadline to complete the pre-course assignments packet and barely retained any information because they were focused on the deadline, not the content. Theme two illustrates that the pre-course assignments packet was a formal learning initiative that proves to be informative and burdensome for faculty members to complete.

Theme 3: Participants underutilized training sessions

The last common learning experience for faculty members were the Blackboard learning sessions and webinars offered by STC online director and GVTC facilitators. In the interviews, faculty members mentioned there were Blackboard LMS learning opportunities offered to them after the technology adoption was launched. Faculty members were made aware of those learning opportunities through emails sent by STC Online Director. In each subheading below, I will explain faculty members rationale for underutilizing the training sessions. Additionally, I reviewed seventy-seven documents in the data corpus that related to Blackboard learning sessions and webinars from the fourth-quarter of 2015 through the academic year 2016 – 2017. During the document review, seventy-seven emails were discovered that pertained to pre-scheduled webinars sessions and webinars. The pre-scheduled webinars sessions and webinars

were facilitated by the STC Online Director and GVTV team members. The STC Online Director was the sender for all correspondence that related to the Blackboard LMS and instructed faculty members to utilize the Google search engine and Youtube website to assist him with learning the Blackboard LMS.

Pre-scheduled webinar sessions were offered and only a few attended

Six of the participants expressed that the Blackboard learning webinars scheduled times were unconducive to their work schedules. In the document review, pre-scheduled webinars sessions were scheduled Monday – Thursday between nine am and six pm. Two Gatekeepers noted that their job responsibilities were not reduced to give them the flexibility they needed to attend the pre-scheduled webinars sessions that were offered.   When Ava spoke about the pre-scheduled learning sessions, she was shaking her head in disappointment. Her voice tone deepens as she offered her perspective:

> I don't recall us having any, and if we did I probably didn't attend, and the reason why is because the initial rollout for that entire semester was a learning experience. That's why I told students to please allow me to get used to this system and in return, of course, I'm going to have leniency with you. Maybe it was not so much of the training, as it was how the training was scheduled. We were still carrying a full load of classes.

Daisy, a Gatekeeper indicated that she did not recall reading any announcements for pre-scheduled learning webinar sessions. She remembered that period being hectic and her feeling overwhelmed with using the Angel LMS, learning the Blackboard LMS, and being overloaded with her regular job responsibilities. Two adjunct faculty members expressed their displeasure with the scheduling of the pre-scheduled learning sessions. Rita stated that she did not attend any of the webinars because:

They just didn't work for whatever reason with my schedule; it just did not. Plus, the Online Administrator, I didn't necessarily think was the best instructor or communicator. Even though the Online Administrator is supposed to be the guru of it all. I don't think sometimes, that person isn't able to translate the information the best.

Anna said, "The college should not schedule their formal training classes during the day when most of your adjunct faculty members are working full-time jobs." Ola did not attend any of the pre-scheduled learning webinar sessions nor did she speak negatively about the scheduling of the sessions, perhaps because she lived out of state. Ola noted, "So, for me, I didn't attend any of the webinars."

Three faculty members, a Gatekeeper and two adjunct instructors did attend at least one pre-scheduled learning webinar session. Edith, a Gatekeeper spoke favorably about the pre-scheduled learning webinar that she attended. In her interview, Edith's cheerful voice heightens as she spoke about the webinar:

I was the only person in attendance. The webinar provided a visual experience of Blackboard. You could follow along with someone who knew what they were doing, and I think that visual experience really helped me to learn the system. The formal learning really helped fill in the minor gaps that I had. Most of my minor gaps were knowing what tools are available and how to use them in a course.

Oliva was satisfied with the pre-scheduled learning webinar that she attended. Oliva expressed, "I may have logged on one time in 2016, and it was pretty helpful. In 2017, "I didn't attend any because I was already trained on Blackboard." Sarah echoed Edith's words when she talked about the pre-scheduled learning webinar that she attended. Sarah phoned into a live webinar for assistance and received the help she needed with the Blackboard LMS. Sarah

indicated that the webinar was useful:

> Oh, the webinar was very useful. I really appreciated it. It was different because I was the only one on the call and so I ask the questions, and you know it kept going back and forth like oh I didn't get this because it was something that I had not used before and how to set up a test or quiz or something. So, I wasn't familiar with that, so I definitely enjoyed it.

The pre-scheduled learning webinars for the Blackboard LMS were beneficial to some faculty members, and for other faculty members, they could not find the time to attend a face-to-face session or link into the webinar through a computer or telephone because of their job schedules. In the document review, STC Online Director emailed to faculty members that some of the pre-scheduled learning webinars were recorded and could be viewed on STC Center for Teaching Excellence website. STC Online Director also posited to faculty members to utilize Google and YouTube to assist them with finding answers to their problems when operating the Blackboard LMS.

Pre-recorded webinars and tutorial were seldom watched

The STC Online Director recorded and posted the pre-scheduled learning webinars and tutorials for faculty members to view at their leisure. In the interviews, a few faculty members mentioned they watched some of the STC recordings for assistance. Whereas, other faculty members used Google and YouTube for help instead of the recordings. Moreover, there were faculty members that utilized all three resources: STC recordings, Google, and YouTube to learn how to operate the Blackboard LMS. In Ava's interview, she spoke of watching a recording and mainly relied on the tutorials from Google and YouTube:

> I may have watched one recorded webinar and then the rest was just me finding

information on my own. I did remember getting advice from the Online Director that if

you're unable to watch there will be plenty of YouTube videos to watch. And, I did watch

those, and they were helpful, as I progressed through that first semester of Blackboard

implementation, I eventually find what I needed.

Sarah described a scenario for using Google as opposed to viewing STC recordings or contacting

the Gatekeeper:

For instance, I had a question about group assignments where I had a classroom of twenty

students but they needed to break apart at the end of the semester to do a group

assignment, a project and I have to group those students into like five different groups or

four different groups. I didn't know how to do that. I didn't want to bother the

Gatekeeper. So, I just went and Googled you know assigning group members in

Blackboard, and it cut through a lot of tutorials about that. So that was very helpful.

Anna watched a webinar and was dissatisfied with the teaching format used for faculty members

to follow along:

For me, the webinars were not that useful. It was more of an awareness in giving some

exposure, and it was not an interactive webinar. It was just listening to someone else

speak, and if you were trying to follow along by taking notes, you would get lost. The

video at times got somewhat frustrating. So it was better just to go ahead and listen all the

way through to see whether or not you can make sense of it. I have used YouTube and

Google to figure out things, and it's helped.

Rita shared that she relied on the recordings created by STC Online Director for

assistance and did not go to Google or YouTube for help. She contacted the Online Director

several times for assistance and was sent recordings to help her resolve the dilemmas she

encountered:

>Okay, I will say this. When I had any difficulties, the Online Administrator would send me videos and those mini videos would help. My request could be about any topic and those mini five-minute videos, if she had mini videos would clear up my dilemmas.

Ola indicated that she watched all the recordings created by the Online Director. Her voice tone raised to a high pitch when I asked her about the recordings. She complimented them:

>Oh, I used all of her tutorials. She provided a lot of good information in the videos. Like I said, the pre-course assignments that she created for Blackboard was actually a great program. So yes, I do use those videos.

Oliva was more inclined to use YouTube to find instructional steps to operate the Blackboard LMS. She was unaware of the location for the recordings made by the Online Director, and the pre-scheduled learning webinar sessions were not conducive to her schedule. When she explained her reasoning to use YouTube, she started with a loud sigh:

>I probably may have attended one webinar, maybe one time. Usually, the times that she schedules, those times are not in my schedule. So, that's one reason why I said that I go to YouTube. Plus, I mean YouTube is open 24 hours a day! And, there are other people on YouTube that have questions, and I just read their little comments. You know, when it is one or two o'clock in the morning you're not thinking about trying to email somebody because you know you're not going to get a response.

Daisy also utilized Google and YouTube to find solutions to her dilemmas with the Blackboard LMS. Daisy expressed her frustrations about the launch of the Blackboard LMS, and the reasoning she turned to the internet to find answers to her problems:

>I don't think that Blackboard was difficult to learn; it was the manner in which it was

rolled out. It's like, we're going to let you take on this on top of everything else that you

are doing. And that's another thing I mean; there's no real manual I mean, we just go to

YouTube or we Google. Yeah, I Google a lot if I have a question about how to do

something. I will Google it or try and figure out on my own.

Edith's first choice to find answers to her Blackboard LMS questions was through the STC CTE

website that was created by the Online Director. She would only use the internet after utilizing

the resources by the Online Administrator:

I would rely on formal methods to learn a feature. And by a formal method, I am

meaning, if I find that I am struggling with let's say a Wiki or something like that, I

would first go to our center for teaching excellence and see if the Online Administrator

has posted a way for faculty to learn it. By her recorded demonstration, I would consider

that to be formal. I would seek out that resource that is already recorded and from the

person who knows! If I couldn't find my answer by participating in that webinar or

recorded session, I would probably then go to other Blackboard resources that would be

online.

In theme three, I presented faculty members' opinions about the pre-scheduled learning

webinar sessions and recordings. Faculty members' expressed their satisfaction and

dissatisfaction with how STC Online Administrator handled the scheduling of the sessions and

recordings. Three faculty members shared their satisfaction with the scheduling and information

they learned from the webinars. Whereas, five faculty members expressed their dissatisfaction

with the scheduling of the pre-scheduled learning webinars. What I found puzzling was that no

one stated in their interviews to suggest to the STC Online Administrator to offer non-traditional

hours for the webinars nor did the STC Online Administrator propose non-traditional hours to

faculty through any of the seventy-seven emails that I reviewed. Even though, STC Online Administrator suggested that faculty would be able to view the webinar videos later if they were recorded, majority of the faculty did not view the videos and chose to utilize YouTube, Google, and their prior knowledge to learn the Blackboard LMS. Thus, the pre-scheduled learning webinar sessions and recordings were formal learning initiatives that were underutilized by faculty.

Theme 4: Participants designed their own learning experiences

Independent Learning

Faculty members learned to operate the Blackboard LMS both independently and collaboratively with their colleagues. All participants frequently mentioned in their interviews how the Online Director and Online Administrator expected faculty members to learn how to operate the Blackboard LMS independently. Faculty members spoke how they learned how to operate and found resolutions to their problems on their own. Ava was on her own to learn the Blackboard LMS, and she expressed those sentiments to the learners:

> For me, I found out on my own, and that's why I told students to allow me to get used to this system, and in return, of course, I'm going to, you know be lenient, but pretty much, after that semester. I had a pretty good handle on things, but it was a lot of trial and error learning on your own

Anna spoke about the length of time she spent on YouTube looking at general Blackboard LMS tutorials. She also used Blackboard instructional resources from another college to help her operate the STC design of Blackboard LMS:

> In my personal time, when I knew we were going to transition. I think, I probably devoted about ten hours a week trying to ensure that I had read or I had looked at

YouTube videos and that I had done all I could do in preparation for it. If it were not for the formal training with the other university where I worked and had training and exposure to it, I would have been petrified to teach that first semester. Plus, I knew enough people, other instructors who did have a little bit more tech-savviness than I did that I felt confident I could get the answers that I needed it. Here again, I have been there for so long I know that you have to put some time into it. Now, because I was using Blackboard at the other college and I was able to go back to those resources, continuously looking them over and hopefully be able to adapt it to STC Blackboard design.

Oliva took time each week prior to the launch of the Blackboard LMS and many semesters after that to learn the features. She knew that she needed to be familiar with the technology because the learners would have questions:

I tried to learn it may be a couple of times a week. The manual that was given to us, I had figured out some shortcuts, and I wrote them down instead of having to go through all of the full steps that they had us to go through. Some stuff, I found little shortcuts on how to do stuff, and so I wrote those down. I would just sit down and play around with it myself, so I would not have to wait on a response or send an email to somebody because you know when you need something immediately you don't always get an immediate response from somebody. I would experiment because I had a new baby. So I would experiment at one and two o'clock in the morning when I had time, and the house was quiet. I don't know if it is the college or it's the students, just a better way of getting students to be acclimated with the system. If they are making it mandatory for students to go to Blackboard for training but in every semester, I come across students that do not understand how to use Blackboard, and I am always like, how do you not know how to

use Blackboard.

Rita improvised her way through the technology adoption process while she taught classes. She was familiar with the Blackboard LMS because she used the system with another higher education institution. She was expressive in her words as she explained how she learned:

Now, I'll be honest with you, I got my Blackboard login, got my classes, and I winged it. I did the best I could. You know, I felt comfortable using it. The reason I felt comfortable was that I was already familiar with how to maneuver from using it with my other online classes at another institution. So, once I got on the Blackboard, I started going through things myself and figuring out what's what. So for me, I wasn't really intimidated by anything, and all I needed for them to do is to give me my classes, let me go into it. And then I started figuring out what was what.

According to Daisy, her learning process was more time consuming because she has never undergone a technology adoption process and was unfamiliar with the Blackboard LMS similar to her colleagues. When asked how often in her personal time did she spend trying to learn that system, she stated:

I spent all my time learning the system. When I was at home, and I had peace and quiet, I would work on stuff. Absolutely, a great deal of my personal time. Oh, I used informal learning, definitely, 100 % more than formal learning. There was really I mean not a lot, not really, enough formal training to speak of.

Edith revealed a unique challenge that she faced in the School of Health and Professional Services. During the technology adoption, the School of Health and Professional Services changed textbooks twice, and she was responsible for revising all instructional content for faculty members to use:

I spent a lot of time on my own outside, you know, at home. I spent a lot of time on it. But I think I am kind of a workaholic. I worked a lot outside of my regular job duties. I worked a good bit of it on my personal time. There were challenges during the transition. It was a lot of work at that time because I was a fairly new instructor. My main challenge was when I was hired in 2013 as a brand new instructor. We were teaching out of a textbook and, with the understanding that the next semester we were going to teach out of the new textbook that was around 2014. And then in 2015 on into 2016, we were changing textbooks again. So not only, I recall in the middle of the transition from Angel to Blackboard. We were also changing textbooks, and so I was working with other instructors about the textbook content. I had to make sure that their content was aligned with the new book rather than with the old book. And all of the old book content was removed. Then, the textbook changed again. The new book that we adopted we ended up not liking it. So then we had to change it again. So, my biggest challenges were really associated with changing of our textbooks at the same time as the transition.

Sarah stated that the Blackboard LMS was not difficult to learn. She credits her online doctoral program where she recently matriculated in helping her navigate the system. She also used Google to help herself be acquainted with the basic features:

I was just coming out of a four-year online learning doctoral program at a university, so I already knew the basic concepts of how to log in and submit assignments. So, I didn't have any challenges or concerns around that, and I think that I'm pretty strong with navigating an LMS. I've been in technology for a number of years, so I'm very good with understanding and utilizing technology, so I had no concerns just anxious. Actually, more anxiety around teaching, you know wanting to make an impression to the students. So,

Blackboard to me is self-explanatory. I already completed the pre-course assignments, which was part of the training process. I read through the material. I did some learning of my own like I went to Google and Googled Blackboard just to get an idea, a better idea of what it was like to be in the system.

Even though Ola is the Blackboard Administrator at another university and all of her instructional coursework is in a different learning platform for learners, she still used Google and a particular website named Blackboard Instructors designed by Blackboard Inc for assistance:

Because of my training and job position here, I was able to learn the Blackboard easier. If I were not an administrator, I would not know how to really use it. I would be referring to a lot of the administrator's videos or going to a lot of her classes in order to operate or to connect my classwork to my students through Blackboard. At times, I did refer back to the training course if the topic was inside the training course, or, I used Blackboard for instructors' website for help because there are videos created by Blackboard the company there. I did watch YouTube videos, and I used those faintly. YouTube does have videos on everything you do in Blackboard, but I prefer Blackboard for instructors' website, and each college has different videos of their own that are on the internet.

Faculty members also revealed that they were required to learn on their own other learning platforms and software that was associated with the Blackboard LMS. The training activities that faculty members were required to complete for the Blackboard LMS did not include any preparation for those learning platforms and software. Moreover, not all schools used the same learning platforms and software; therefore, faculty members were limited with seeking help from other school's faculty members during the technology adoption of the Blackboard LMS. According to faculty members, part of their challenges with learning the

Blackboard LMS was figuring out the connection between the Blackboard LMS and the different learning platforms and software. Ava became slightly unsettled when she described her experience:

> I reached out to then, the Online Director because he said you needed to use a program called Respondus to pull over your test bank, but Respondus which is a software that did not respond to every publisher's test bank. So for some of it, I think I just finally gave up and said okay I would go in and create a test, I would just literally copy and paste every question, and every answer enter every box, and that is extremely time consuming and leave room for error when you do it that way. It is so much better when you can just download a test bank into Blackboard, and it just populates. So in some cases, I had to do it manually that was probably the biggest nightmare because there was really no training on it and I want to say that not everybody uses the same material or the same publisher.

Sarah's challenge concerning other learning platforms were the McGraw Hill Connect classes. According to Ava and Daisy who are program directors in the School of Business and Computer Information System, STC uses Blackboard LMS to connect to McGraw Hill Connect learning platform to administer coursework and assignments to adult learners. Blackboard Inc. and McGraw Hill Connect have a partnership where higher education institutions that use the Blackboard LMS will also have access to McGraw Hill Connect learning platform (Blackboard McGraw Hill, 2019).

Blackboard Inc., McGraw Hill Connect, and Technical College System of Georgia (TCSG) have collaborated to create a curriculum for selected classes in specific programs to administer assignments and assessments. STC adult learners sign into the Blackboard LMS and then click a link that takes them to the McGraw Hill Connect learning platform. STC instructors

need to know how to operate the functions with McGraw Hill Connect in order to administer the assignments and assessments. Sarah was unaware of the website link to McGraw Hill through the Blackboard LMS and was ambiguous on how to operate that learning platform:

> The only challenge that I really had was around the McGraw Hill Connect. STC's Finance program is actually integrated within McGraw Hill Connection platform where a lot of the assignments are preloaded such as video presentations and things like that which are a little different from the Blackboard system. It was new to me, so I had to rely on my program director as well as our McGraw Hill key contact person to help me. So, what happens is that I click a link in Blackboard and then that link takes me outside of Blackboard to McGraw Hill Connect website. And then, McGraw Hill's website is set up a little bit different than Blackboard. So, it's really just how to utilize the interface of Blackboard with another learning management system. I think that is the biggest challenge that I've had.

Oliva had the same sentiment as Sarah about the McGraw Hill connection course that is linked in the Blackboard LMS. Oliva was ambiguous on how to manage McGraw Hill's learning platform:

> I wasn't very familiar with the connect courses in Blackboard. We had not been that verse on those, and I am still teaching myself to that. For assistance with the connect courses they told us to reach out to McGraw-Hill representative. I contacted our STC rep for that. I also used YouTube. I used YouTube to learn how to change the dates and manage in my connect courses in Blackboard.

The School of Arts and Sciences where Ola teaches uses Educosoft and MyLabMath to teach adult learners. Educosoft and MyLabMath are also learning platforms that STC uses to

administer assignments and assessments (Educosoft Lab, 2019; Pearson MyLab Math, 2019).

Unlike McGraw Hill Connect, Educosoft and MyLabMath do not have direct links within the

Blackboard LMS, their instructor through email or an announcement in the Blackboard LMS

provides adult learners the link.   STC instructors that teach math need to know how to operate

both Educosoft and MyLabMath to ensure the assignments and assessments are arranged

properly for students. Ola reiterated several times during her interview that she only uses the

Blackboard LMS to communicate with learners about their grades and school announcements.

Ola explained how Educosoft and MyLabMath are used in the School of Arts and Sciences:

> In my department, we are required to use two systems Educosoft and MyLabMath.
> Educosoft is another platform just like MyLabMath. Students pay for a code to access
> those systems. The coursework that they do for my courses are in there, and I can send
> my students messages. So all of their homework, quizzes, tests and final are located in
> Educosoft and MyLabMath, not in Blackboard.   We have to tell the students that they
> have to create logins for two different systems. So Blackboard is a unit, it's a system to
> house your stuff. You can do work out of it, you can create actual interactive work but
> those other systems MyLabMath and Educosoft are strictly practiced work. STC hasn't
> trained us for MyLabMath or even Educosoft. They said here is our new program and
> you will be teaching from it. So you had to be technically savvy to maneuver through
> Educosoft and MyLabMath,

The School of Health and Professional Services uses Assessment Technology Institute

(ATI) learning platform, which is different from the other schools. ATI specializes in developing

nursing education assignments and assessments that can be used in conjunction with higher

education institutions curriculums. ATI does not have a link within Blackboard and an instructor

will provide the link to adult learners through email and/or the announcement page in the

Blackboard LMS. Edith, a Gatekeeper in the nursing program describes the ATI learning

platform that the nursing students are required to use:

> We use something called ATI, which stands for Assessment Technology Institute. This is
>
> not really considered a learning management system. It's more like, a company that offers
>
> nursing education. They offer tests, quizzes, and digital resources available for nursing
>
> students. We assign ATI practice tests and proctor test for students. Some are assigned,
>
> and some are chosen in there for students to just do for practice. The whole idea for this
>
> resource is to prepare students to sit for their NCLEX exam. This system gives students
>
> immediate feedback after taking a test. The feedback gives details about their areas of
>
> weakness and points them back to what they need to review. It also gives them a
>
> predictability score, a predictability of passing the NCLEX.

Rita's challenge was with the administrative software Banner Web that is used by all

TCSG institutions to maintain student grades and demographic information. Rita stated that

learning Banner Web was her "biggest hurdle. " Whereas, Daisy and Anna did not express

having difficulties with those other learning platforms or software. Faculty members repeatedly

expressed that they were not offered any training for those learning platforms and software,

which resulted in faculty members to rely on each other to gain knowledge and have support for

those learning platforms, software, and the Blackboard LMS.

Collaborative Learning

Collaborative learning was another component faculty members used to adapt to the

Blackboard LMS. When faculty members could not independently solve a problem, they

reached out to their colleagues for assistance. In the interviews, all faculty members talked about

their interaction with another colleague or their school would have scheduled and impromptu meetings to discuss problems and resolutions as they used the Blackboard LMS.   Ava spoke openly about how her department worked together to resolve problems:

My colleagues and I would contact the online administrator, and that person did as much as that person could do with that person's limited knowledge to help us with learning it. I am of the mindset that I enjoy working collaboratively anyway with my peers so sometimes it's just a matter of us getting together sometimes. We'll do it formally, sometimes we did it informally, and we'll just kind of talk through what it is we were trying to do and the different things you might not understand to help each other out. For example, something went wrong with my grade book; a lot of the issues had something to do with the grade book. Or, oh I put a discussion out there, and I can't find it, the students can't see it, you know or that the quiz is showing twice and I don't know why. So we would just go into one of our offices with those type of situations. During that time, I would just go into someone's office, or somebody would come into my office. I am always in faculty mode. I am always in instructor mode. If there was something that I can do if I can get it done on my personal time, and it will take 15 to 20 minutes, why not do it. If I saw a student that had an issue especially during that time. I would work during my personal time to figure out how it needs to be done. I would have taken the time to do it. Before I became really familiar with it, it will probably take thirty to forty minutes maybe to figure out what's going on. But a significant part of my personal time was taken up with what I needed to do to help my students be successful.

According to Edith, she was inadvertently elected the point person to help other faculty members in the School of Health and Professional Services learn the Blackboard LMS. She

mentioned that she was a fairly new employee and quickly realized that she was the most

technology savvy person in the department:

> I did not know that I would be a Gatekeeper because I was a fairly new employee. Like,
> I was new to teaching anyway. How can I be a Gatekeeper? However, within my
> department I think it was assumed, I assumed and came to the discovery that I was the
> most techie person in our group and that it would land on my shoulders. I assumed that I
> would be creating the courses, but I did not know how much work it would entail. My
> department director and I would come together to discuss various issues. It was more
> often of her coming to me, but we did somewhat informally sit together and work on
> somethings. You know, I would help her check her grade book to make sure her
> categories were all properly set and flowing into the weighted total. Just to make sure
> everything was flowing. Now, there was another colleague didn't catch on, as quickly to
> Blackboard, so I would say that I spent a great deal of time informally with her to teach
> her how to edit her exams and how to upload her assignments. Once we launch, there
> were a lot of questions. I would say that during the launch it was almost every day I was
> in her office helping her out, twice a week during the launch. After the first couple of
> semesters, that amount of time decreased to maybe once every other week. I would say,
> informally that we would get together as needed.

In the School of Business and Computer Information Systems, Daisy and her colleagues

relied on each other but mainly on one particular Gatekeeper to her understand how to operate

the features in the Blackboard LMS:

> So there was an instructor that used to be here; his name was Dr. Smith. He was very
> familiar with Blackboard because he used it at other universities where he taught and in

his doctoral program. He was familiar with the different designs of the Blackboard LMS.

I heavily relied on him to help me when I got stuck. You know, I may have an issue with

my gradebook, and I could not figure out why he would come over and show me what I

needed to do. He walked over to my office numerous times to help me. He was kind of

the guru for our school. He was a techie kind of person but, you know, we all relied on

him and then, we even help each other. Basically, we would casually ask each other to

help figure out something. Lots of collaboration amongst peers. We discussed our

frustrations. We relied heavily on each other and, really we still do

In the adjunct faculty member interviews, their viewpoints about collaborative learning

were slightly different from their Gatekeepers. Anna mentioned that full-time faculty members

have more support options than adjunct faculty members do. Anna was very expressive about the

limited supportive options for adjunct faculty members:

My main support in learning Blackboard has been calling on Daisy, my Gatekeeper and

one other adjunct instructor. When you don't have tech support for darn near seventy-two

hours. It just would be good to have some kind of forum where we can go, and it's not

too old ladies sitting there talking on the phone saying hold on hold on let's work it out.

That's what I have to do with the other adjuncts that have been there as long as I have.

Sometimes we are literally on the phone thirty minutes to an hour or more trying to figure

different things out. You know, you have to have someone that you can kind of bounce

questions off-of to get information or get a better understanding because adjuncts do not

always have the same support as full-time instructors. Number one, even when we do

have situations especially when teaching online. The college's tech support system closes

every day at six o'clock pm and is not open on Fridays, but I am teaching online classes

and is expected to converse or respond to a student within twenty-four to forty-eight hours, and tech support closes at six pm. It's kind of hard sometimes to get things to work properly or to figure things out unless you go to another adjunct or someone who has you know encountered or have a little bit more technical background than you.

Rita's collaborative learning was with the Online Administrator, technical support, and Daisy, a Gatekeeper. She expressed that not all Gatekeepers organize the courses correctly for adjunct faculty members. She had multiple incidents where a particular Gatekeeper would disorganize classes, and she had to contact technical support during the day and Daisy after hours to help her correct the instructional content. Rita recalled the incident:

From my understanding, the courses were supposed to be set up with all the necessary required assignments and, when it wasn't done one term, I had to go in and do it myself. I was like; you got to be kidding me. So I was like, how do I do that. I contacted Daisy, another Gatekeeper to help me. When I had any difficulties, I would at times, contact technical support, Daisy, and the Online Administrator. I reached out to technical support, and technical support helped me to understand that I can go in as a professor and make some changes. For example, if I wanted to make changes to the discussion board, I can do it, but I need it to do it in two places. If I didn't do it in two places, it wouldn't happen. To be honest with you, Daisy has always been available. She's been very good.

If she could help me, she would and make suggestions on where to find the answers, or this is a technical question that you need to reach out to the Online Administrator. She also expressed that more planning should have been involved with the rollout of the Blackboard LMS for adjunct faculty members to have a "go-to- person" in every school for help.

Okay, we used to say in the job that I had, well, here they come with another new idea.

They are rolling it out before they thought it out. Blackboard was rolled out before thought out, meaning, they put a product out there before it was really ready for the market. So, sometimes when they are rolling out a new system, everybody needs to understand how it is going to affect the bottom line. Which, in this situation, to me is the student. Now not only, somebody in the department needs to take ownership and make it their baby and be that go-to-person. Somebody got to be in front of the adjunct professors learning it and mastering it so when it is rolled out we have go-to-people. What I found was, it was rolled out to the full-time folks, and they were learning it just like the rest of us. Even though we had people to go, and they were figuring it out too. So, instead of someone being ahead of the rollout six months prior, they were learning it at the same pace we were too.

Each school requires different job responsibilities of their adjunct faculty members and provide a different level of support to them. Within the School of Business and Computer Information Systems Oliva worked under the Finance program Gatekeeper. Oliva details her perspective as an adjunct instructor about the collaborative learning she experienced:

I would talk to my Gatekeeper; sometimes we would have issues about the due dates and especially the discussion boards. So, she and I were going back and forth on how to go in and change the dates with the discussion board so we kind of learned together on that because everybody was learning together. So, we were figuring it out. I do not know any other adjuncts because we don't really interact; we don't really see each other.

Sarah also worked under the Finance program Gatekeeper. She complimented the Gatekeeper on her willingness to assist with various issues with the Blackboard LMS. Sarah also used technical support to help her:

Oh my program manager, oh Gatekeeper was incredible. If I had a question about, you know setting up a group or anything pertaining to Blackboard she would help me find the answer. I do not know any other colleagues to call, but I might contact technical support if I had a situation where students say "I can't access a quiz" or a student has sent me a paper, and I can't open it. Then I'll contact technical support to see what I'm doing wrong. Then, I'll extend the assignment, and it's still not showing according to what the student is saying, or I can't open up the document. And typically with that its technical issues and they'll take over because it's not something that I'm doing incorrectly it might be something that the student is not doing correctly but other than that it's really, me going to them for technical issues.

Ola had the same issues as the other participants with the grade book in the Blackboard LMS. Although Ola is the Blackboard Administrator at another university, the STC Blackboard grade book designed was different from the university where she works. Ola explained her need for assistance from other faculty members:

The biggest challenge was the gradebook in the Grade Center tab. I needed help because when you set it up Blackboard would automatically create a link in the Grade Center that miscalculated the grades for students. A column was missing, and I was looking for that column, but it had to be created as an assessment. It had to be under assessments in order to give it a column. So, the Gatekeeper and I figured it out and labeled it as an assignment in order to give them points for what I wanted them to do.

All participants expressed their willingness to learn independently to ensure they were knowledgeable with the sequence of steps to operate and manage the features in the Blackboard LMS. When faculty members encountered problems in their independent learning, they turned

to collaborative learning for assistance.

Chapter Summary

The four themes in this chapter were derived from the interviews of eight faculty members that experienced a technology adoption of the Blackboard LMS at STC.   In theme one, faculty members shared their perspectives about the structure of the initial learning meeting that was required for them to attend. The data revealed that faculty members viewed the one day of training to be an introduction to the Blackboard LMS that did not allow any input from them about the learning process. In theme two, faculty members believed the Blackboard LMS pre-course assignments packet was a great way to help them learn how to operate the Blackboard LMS. In the same vein, faculty members noted that the volume of pre-course assignments packet was too much to complete in the short time given to them in conjunction with their regular job duties.

For theme three, faculty members conveyed their sentiments about the scheduling of the pre-scheduled webinar sessions for the Blackboard LMS. According to some faculty members, the pre-scheduled webinar times were not flexible enough to accommodate their daily employment schedules. A small number of faculty members viewed the pre-recorded webinars and tutorial sessions. Lastly, theme four, faculty members that did not attend or watch any of the training activities turned to Google and YouTube videos for assistance to learn how to operate the features the Blackboard LMS. Faculty members quickly realized that they would have to take the initiative to learn the Blackboard LMS on their own.

Moreover, faculty members were required to learn different learning platforms and software concurrently as they learned the Blackboard LMS to teach their classes. Faculty members used different platforms and software depending on the school where they worked,

which made the learning of those platforms and software challenges. When faculty members could not resolve their problems, or find an answer with Google or YouTube, they relied on collaborative learning for assistance. I learned that collaborative learning was instrumental in each faculty member's success to operate the Blackboard LMS and other learning platforms. The findings from this study have provided evidence about the common learning experiences and the different approaches faculty members used to learn the Blackboard LMS.

CHAPTER 6

CONCLUSIONS, DISCUSSIONS, IMPLICATIONS, AND RECOMMENDATIONS

The purpose of this study was to examine the learning experiences of faculty at a state technical college who were required to participate in a new technology adoption of the Blackboard Learning Management System (LMS). Two research questions guided this study:

1. What were the common learning experiences of faculty participating in the adoption of a new learning management system?

2. How did the participating faculty navigate the requirement to learn or adapt to a new system?

This qualitative case study was designed to examine a technology adoption through the lens of faculty members as they learn how to operate the Blackboard LMS at an STC. I chose this phenomenon because of my experience with this particular technology adoption and with speaking to the Gatekeeper within the School of Business & Computer Information Systems where I work that other faculty members had similar experiences. The literature has shown that few studies have investigated a technology adoption from faculty members' perspectives given that their adeptness is a significant component to the success of a technology adoption (Ball & Levy, 2008; Ge et al., 2010).

Eight faculty members from three different schools within STC participated in this study that provided information regarding their experiences with the technology adoption. It was noted that only female participants volunteered to participate in this study when the recruitment letter was emailed to all 486 faculty members, flyers were posted in visual locations on STC

campuses, and I attended a mandatory meeting for faculty to solicit participants. However, it is not a surprise that only females volunteered for this study because STC employs more females at 62.8% to males at 37.2% (Dittmann, Carson, & Nelson, 2017). Per the U.S. Department of Education Statistics 2017 report, there were more females at 55% employed in full-time and part-time positions than males at 45% at Two-year colleges' (Snyder, Brey, & Dillow, 2019).

It is no surprise that more adjunct faculty participated in this study because STC employs more adjunct faculty at 81.9% to full-time faculty at 18.1% (Dittmann et al., 2017). The Technical System of Georgia (TCSG) 2019 Fast Facts Report indicated that the overall technical college system employed 882 part-time faculty and 238 full-time faculty members in 2018. Moreover, the ethnicity of participants in this study were seven African American females and one Caucasian female. STC ratio of faculty ethnicity breaks down as African American 66.9%, Caucasian 30.0%, Hispanic 1.9%, Asian 0.6%, and Other 0.6% (Dittmann et al., 2017). TCSG does not provide information about faculty ethnicity for its colleges, nor does each college provide a fact book about their faculty demographics. However, the U.S. Department of Education Statistics Report (2017) noted that Caucasian females at 40.8% and Caucasian males at 31.0 faculty members are employed more at Two-year public institutions compared to other races (African American, Hispanic, Asian, and Other) at 28.20%.   It is also coincidental that six of the participants worked in the School of Business & Computer Information Systems where I worked and I was acquainted with one person, Daisy, a gatekeeper.

As previously mentioned, four themes emerged from the findings: (a) Training occurred without stakeholders input, (b) Training was informative and burdensome to participants, (c) Participants underutilized training sessions, and (d) Participants designed their own learning experiences. In this final chapter, there are four sections. The first section will discuss the two

conclusions of the study that will integrate relevant literature. The second section will explain the implications for theory and practice. The third section discusses the limitations of the study. The fourth section will present recommendations for further research, and I will conclude with a chapter summary.

Conclusions and Discussion

There were two distinctive conclusions that emerged from this qualitative case study: (1) The common learning experiences of the group were frustrating and did not sufficiently fulfill the needs of the participants and (2) Faculty navigated the requirement to learn a new system by using their prior knowledge as educators to create a process of self-directed, collaborative learning approaches, and looked beyond the management system that was assigned to examine similar systems that more directly served their needs. Each conclusion will be discussed in depth below.

Conclusion one: The common learning experiences of the group were frustrating and did not sufficiently fulfill the needs of the participants.

The first research question was "what were the common learning experiences of faculty participating in the adoption of a new learning management system?" I concluded that the common learning experiences of the group were frustrating and did not sufficiently fulfill the needs of the participants. The common learning experiences were the various formal training activities that STC Online Administrators and GVTC facilitators developed for faculty members to participate in before and during the technology adoption of the Blackboard LMS.   Faculty members expressed that the training activities lacked depth, limited time to complete planned learning assignments, and inconvenient scheduling of training webinars.

Hart and Staveland (1988) defined frustration as when an individual feels insecure,

stressed, discouraged, and annoyed versus feeling secure, gratified, content, relaxed, and complacent when performing a task. Leaders that underestimate employees' frustrations because of an organizational technology change make a serious mistake for the implementation process (Lilly & Durr, 2012). Employee frustrations occur when they do not accurately understand the reason for the change, given inadequate training, and presented an unrealistic perspective about the increase of their daily workload (Bartlett & Bartlett, 2016). Scholars have noted that students get frustrated when their instructors are not knowledgeable about the technology and cannot answer their basic technical questions in a timely manner (Dumford & Miller, 2018; Hove & Corcoran, 2008; Pollock & Wilson, 2002). Scholars also indicated that faculty members get flustered when there is no or little technical or instructional support for them (Lilly & Durr, 2012; Mansbach & Austin, 2018; Veletsianos, Kimmons, & French, 2013).

According to Lilly and Durr (2012), the way for leaders to transform employee feelings of frustrations to positive feelings is by creating a work environment that fosters trust and organizational support. Lilly and Durr (2012) research findings revealed that employees with positive attitudes towards a technology change were more likely to assist the organization with ideas to help improve the implementation process and have pride in working for the organization. As mentioned in chapter 2, adequate training for faculty readiness is a critical factor that can decrease frustrations during a technology adoption process (Baylen et al., 2012; Ge et al., 2010; McCarthy, 2009). Unfortunately, in this study, majority of faculty members were frustrated because they did not trust that the training activities adequately prepared them to operate the Blackboard LMS. Furthermore, faculty did not trust STC instructional and technical support systems to meet their needs during the technology adoption process.

In the literature, STC's training activities would be inferred to as formal learning

activities because the learning materials were developed, controlled, and evaluated by STC Online Administrator (Mocker & Spear, 1982). The design of the formal learning activities affected how faculty members learned and accepted the technology adoption. Majority of the faculty members indicated in their interviews that they had concerns before and even more concerns after the initial training meeting for the Blackboard LMS. During the initial training meeting, there were no documents with instructions handed out nor emailed prior to the meeting for faculty to bring to the meeting. It was evident that the STC Online Administrators had no innovation configuration (IC) map about the Blackboard LMS as described by Hall and Hord (2011) concerns-based adoption model (CBAM) to disbursed to faculty members to follow. An IC map is a tool that pinpoints key components of an innovation as it is put into operation (Hall & Hord, 2011; Hord et al., 2014). An IC map would have been helpful for faculty members to have a tangible document in hand about the material that was covered in the initial training meeting.

Furthermore, I concluded that all faculty members started in the self category in the stages of concern (SoC) model at levels one-informational and level-two personal. Faculty was aware that they had to learn the Blackboard LMS and they arrived at that initial training meeting with an eagerness to learn the Blackboard LMS and how would the learning process of the innovation affect them. If STC Online Administrators would have conducted a survey immediately following the initial training meeting such as the SoCQ and the change facilitator style questionnaire (CFSQ), the STC Online Administrators would have gained valuable knowledge of what faculty needed and what changes to make before proceeding forward with the technology adoption.

Rogers (2003) diffusion of innovation theory is a four-stage model (innovation,

communication, time, and social system) that faculty members also experienced during STC's

technology adoption process. Rogers (2003) explained that for users to accept a change in

technology, they must be given a sufficient level of how-to-knowledge and practice before the

release of the new technology. STC Online Administrators and GVTC facilitators presented the

initial training meeting to faculty as a dialogue session but it resulted in a monologue session

with limited questions from faculty. Senge (2006) stated that a good facilitator would engage the

audience and help participants take ownership of the learning process. The findings in this study

revealed how STC Online Administrators and GVTC facilitators' did not provide sufficient how-

to-knowledge for faculty to learn the Blackboard LMS.

Faculty members also spoke about the location of the initial learning meeting was

insufficient. The meeting was scheduled on a Saturday morning for four hours in a conference

room that had a minimum of two-hundred people. Faculty members were not told to bring their

laptops; therefore, some participants were not able to follow along with the facilitator of the

meeting. The situated cognition theory contends that learning is situated in an environment

where the context reflects how the knowledge is gained and applied to an everyday situation

(Altalib, 2002; Gomez & Lee, 2015; Lave & Wenger, 1991). The current findings extend the

literature that leaders did not effectively organize a formal meeting that supported faculty during

their learning process. The initial learning meeting did not represent a real learning environment

where faculty members could receive individualized coaching, experiment with the learning

materials, or conduct a self-reflection about the information presented to them.

The location of the initial learning meeting did not cultivate a safe space for faculty

members' to learn nor did STC Online Administrators effectively communicate the perceived

ease of use for the Blackboard LMS in the meeting. The communication stage in the diffusion of

innovation model contends that communication is "a process in which participants create and share information with one another in order to reach a mutual understanding" (p. 5) to learn the technology. The current findings show that the communication level between STC Online Administrators and faculty on how to efficiently operate the Blackboard LMS was undoubtedly insufficient. Research has shown that faculty members who are not confident in their ability or competence to use technology do not understand the perceived usefulness of new technology nor understand the perceived ease of use to integrate new technology in their teaching practices (Davis, 1989; Koul & Eydgahi, 2017; Sutton & DeSantis, 2017). Additionally, six faculty members complained that they were not compensated for attending the initial learning meeting. Faculty members' displeasure about compensation echoes the literature that compensation should be given to faculty during a technology adoption (Jones, 2015; Muilenburg & Berge, 2001; Reid, 2014). With faculty not being compensated for training along with inadequate training resulted in some faculty members' frustration and hesitation to learn the technology adoption.

Another common learning experience for faculty members was the pre-course assignment packet that was created by STC Online Administrators. In my analysis, when faculty members completed the pre-course assignments packet, they were in stage two-preparation for the levels of use (LoU) in CBAM. At stage-two preparation, users are preparing materials and practicing on the innovation before its initial use. STC Online Administrators expected faculty members to complete the packet within thirty days. Furthermore, six faculty members would be at LoU stage three-mechanical use. Mechanical use is when users focus on the short-term day-to-day usage of the innovation with little time for self-reflection. Those six Faculty members stated they were more focused on meeting the completion deadline and maintaining their daily work duties than

retaining the information. It is apparent from the interviews that all faculty members were overloaded during the technology adoption process. Lokken (2013) survey results revealed that faculty and administrators could experience migration fatigue during a transition of an LMS. Migration fatigue is when administrators and faculty become exhausted while maintaining their current workload and learning a new LMS (Lokken, 2019; Varnell, 2016). I concluded that faculty members experienced migration fatigue because of their job workload and learning process of the Blackboard LMS.

The pre-course assignments can also be classified as informal learning and self-directed learning because faculty members completed the packet autonomously. The pre-course assignments were beneficial for faculty members to learn to operate the innovation. In other words, the completion of the pre-course assignments helped faculty members gain optimism about the perceived usefulness and perceived ease of use of the Blackboard LMS. Perceived usefulness concept for a technology adoption is "the degree to which a person believes that using a particular system would enhance his or her job performance" (Davis, 1989, p. 320). For example, Godoe and Johansen (2012) findings showed that when faculty members have optimism and innovativeness to learn new technology, they would find an LMS to be more useful and easier to use than pessimistic users.

The contextualization of perceived usefulness in the completion of the pre-course assignments by faculty members connects to the time stage in the diffusion of innovation model. As mentioned in Chapter 2, a synopsis of Rogers (2003) time stage has three phases: (1) innovation-decision process stage occurs when an individual forms an opinion about the innovation; (2) innovativeness stage illustrates how early or late an individual adopts the innovation, and (3) rate of adoption stage shows the relative speed individuals in the social

system adopts the innovation. In the context of this current study, the innovation-decision process occurred with the initial learning meeting where some faculty members found the meeting to be sufficient and insufficient that formed their opinions for the new LMS. In the innovativeness stage, all faculty members noted they were early adopters of the new LMS because they enjoyed teaching and wanted to be astute enough to use the functions and to assist their adult learners with the new LMS. The last stage, the rate of adoption showed that the pre-course assignments helped faculty members as a social system to form an accepting attitude toward the technology adoption. The pre-course assignments were the last required common formal learning activity that faculty members experienced before the launch of the Blackboard LMS. Rogers (1983) noted that the "time stage does not exist independently of events, but it is an aspect of every activity" (p. 20) of a technology adoption. Thus, the formal learning activities along with faculty members' frustrations and satisfactions about those activities resulted in their mediocre opinions on how STC Online Administrators implemented the technology adoption process.

The pre-scheduled webinars and tutorials were additional common learning experiences for faculty members during the technology adoption process. The pre-scheduled webinars were voluntary formal learning opportunities offered after the launch of the Blackboard LMS where faculty members could gain more knowledge on how to operate the features. In my review of the seventy-seven documents that were sent to faculty members by STC Online Administrators, I learned that STC Online Administrators emailed a sufficient number of opportunities for faculty members to participate in the pre-scheduled webinars. The pre-scheduled webinars were offered during the traditional nine-to-five business hours, which is probably the reason that only two

faculty members out of over four hundred faculty members attended only one webinar during the technology adoption process.

The Gatekeepers indicated that they would have appreciated some release time from their regular duties to attend the webinars. Their viewpoints were consistent with other research studies when faculty desired to have release time from their daily work duties (Baylen et al., 2012; Ge et al., 2010; Varnell, 2016). Five adjunct members expressed that the times were inconvenient to their regular work schedules. Research studies also coincide with their perspectives that webinar training sessions should be offered at nontraditional work hours and that the webinars could be considered as professional development training that most higher education institutions require for their faculty and staff (Bolliger & Wasilik, 2009; Ge et al., 2010; Lokken, 2013, Varnell, 2016).

I recognized that STC Online Administrators and faculty members experienced SoC stage four-consequence and LoU stage-routine in the CBAM. SoC stage-four consequence is when users are concerned about their use of the innovation and the effects on the client. LoU stage-routine is when the innovation has been stabilized. Majority of the faculty members had concerns whether they were using the features and functions in the Blackboard LMS correctly to teach the adult learners. Faculty noted that they constantly experienced problems and so did their adult learners. Those constant problems caused faculty members to have distrust in the pre-recorded webinars and tutorials because of the flaws they found in the videos made by STC Online Administrators and GVTC facilitators. STC Online Administrators and GVTC facilitators maintained the design of the Blackboard LMS as a stable layout but constantly made changes and updates to fix technical issues.

Conclusion Two: Faculty navigated the requirement to learn a new system by using their prior knowledge as educators to create a process of self-directed, collaborative learning approaches, and looked beyond the management system that was assigned to examine similar systems that more directly served their needs.

The second research question was "how did the participating faculty navigate the requirement to learn or adapt to a new system?" I determined that faculty members' informal learning initiatives to learn the Blackboard LMS occurred through self-directed learning and collaborative learning where they had to look beyond the management system that was assigned to examine similar systems that more directly served their needs. Six of the faculty members were disappointed that the formal learning activities did not provide sufficient instructional techniques on how to use the Blackboard LMS and two faculty members were satisfied with the activities. A drawback to formal workplace learning activities and structured on-the-job training is the rigidness imposed on employees to follow the exact steps set by an organization (Ahadi & Jacobs, 2017; Boileau, 2017; Cross, 2007). It is apparent from the study's findings that faculty members need structured learning activities and those activities need to allow self-directed learning activities.

Faculty members created individualized, self-directed learning strategies to familiarize themselves with the functions. The findings of this study align with Candy's constructivist view about self-directed learning. According to Candy (1991), self-directed learning has four dimensions: personal autonomy, self-management in learning, the independent pursuit of learning, and the learner control of instruction. First, each participant expressed her willingness to have personal autonomy over learning specific materials that she needed to know that would help her operate the Blackboard LMS. Secondly, each faculty member created her own self-

management strategy for when, where, and time the learning process occurred. Thirdly, faculty members' independent pursuit of learning shows their eagerness to figure out the logistics on how certain features operated. Lastly, faculty members ensured that they were in control of the instructional material because they tailored the material to their specific needs. Candy (1991) noted "self-direction is acknowledged as a product of the interaction between the person and the environment" (p. 246). Faculty members were in control of the learning experience because they were adamant in being prepared to teach that first semester and continued their self-directed learning strategies after the launch of the Blackboard LMS.

The self-directed learning theory encourages persons to tap into their prior knowledge through experiential techniques to learn new technology (Quinney, Smith, & Galbraith, 2010). For example, Quinney et al., (2010) findings showed that when university leaders put faculty and adult learners learning over productivity, the training and launch of new technology would be more successful. Additionally, Quinney et al., (2010) study, revealed that university leaders allowed faculty to learn new technology over several months and at their own pace that resulted in faculty members retaining more information and were more at ease with using the technology. Unfortunately, STC Online Administrators did not consider those self-directed training techniques from Quinney et al., (2010) study that would have benefited faculty.

Moreover, faculty members' self-directed learning and experiential learning strategies assisted in resolutions to the real-life problems they encountered during the technology adoption. For example, faculty members mentioned that they instinctively turned to Google and YouTube for assistance during their self-directed learning process. Even though faculty members could view pre-recorded Blackboard learning webinars, when they encountered a problem, their first instinct was to use the internet for help. Some faculty members did eventually view some pre-

recordings, but they stated that some of the videos missed some steps and that confused them. I surmised that faculty had minimal confidence in the formal learning materials and more confidence in their self-directed learning strategies. Schugurensky (2000) noted that informal learning approaches such as self-directed learning could complement, reinforce, or even contradict knowledge acquired from the formal learning undertakings. Therefore, faculty members' self-directed learning strategies complemented and at times contradicted the basic knowledge presented to them through STC's formal learning activities.

Fenwick's five perspectives (reflection, interference, participation, resistance, and co-emergence) of the experiential learning theory is an approach to help explain faculty members' informal experiences during the technology adoption process. First, the reflection perspective (constructivist theory) occurs when the learner makes meaning from one's experience. Fenwick (2011) stated, "a learner is believed to construct, through reflection, a personal understanding of relevant structures of meaning derived from his or her action in the world" (p. 6). Each faculty member constructed her opinion about the formal training activities that compelled her to form a self-directed learning strategy for the Blackboard LMS.

Secondly, the interference perspective (psychoanalytic theory) happens when the learner has unconscious and conscious mental conflicts during the learning process. The findings uncovered faculty members' experienced internal conflict about whether they would be able to master the basic operational features of the Blackboard LMS. Faculty members pondered if their previous knowledge of an LMS would be transferable to the new Blackboard LMS. Fenwick notes, "the consciousness is anxious about its own uncertain, impartial knowledge and ability to know, fragile in its own boundaries and existence, and often resistant to learning" (p. 8). Faculty mentioned that the operational steps to use the features of the Blackboard LMS were entirely

different from the Angel LMS operational steps. The difference between the two LMSs caused

faculty to have concerns about their adeptness to learn during the technology adoption.

Thirdly, the participation perspective (situative theory) is the environment where a person

learns with others. The findings discovered that faculty members were not presented with

opportunities to have dialogue sessions with the facilitator or colleagues during the formal

learning activities. According to Wilson (1993) "if we are to learn, we must become embedded in

the culture in which the knowing and learning have meaning: conceptual frameworks cannot be

meaningfully removed from their settings or practitioners" (p. 77). STC Online Administrators

missed an opportunity for faculty to ask them detailed questions about the features and functions

before the launch that might have prevented some of the hindrances with the gradebook,

discussion boards, student group arrangements, and how to use the other learning platforms

along with the Blackboard LMS.

Fourthly, resistance perspective (critical cultural theory) is a person's viewpoint about the

culture, political stance, and power in an organization. The resistance perspective analyzes the

"structures of dominance that express or govern the social relationships and competing forms of

communication and cultural practices within a system" (Fenwick, 2000, p. 13). The findings

showed that the majority of faculty members respected the overall culture at STC and there was

no political stance that hindered their learning during the technology adoption process. However,

the majority of faculty members were critical to how STC Online Administrators implemented

the formal learning activities to learn the Blackboard LMS. There were faculty members that had

experienced a previous technology adoption with STC and indicated the recent process was

better than before but the process was still inefficiently implemented. It was common knowledge

that the STC Online Director was hired a year before the technology adoption of the Blackboard

LMS and the Online Administrator was six months into that position. I deemed that STC's Online Administrators were inexperienced or had minimal experience with an extensive organizational change process.

Lastly, co-emergence perspective (complexity theory) is how the learner can adjust to new situations in new environments. Faculty members demonstrated co-emergence approaches through their self-directed learning strategies and collaborative learning methods. Fenwich explains co-emergence in two principles. The first principle is that "the systems represented by person and context are inseparable, and the second principle is that change occurs from emerging systems affected by the intentional tinkering of one with the other" (Fenwick, 2000, p. 16). Faculty members spoke of their diligence to learn the Blackboard LMS during their personal time and when they could not figure out solutions to various problems, they turned to their colleagues for assistance. For example, full-time faculty spoke of an impromptu meeting in a faculty member's office to discuss how to create student groups, change a group, and deploy the group for students to view within the Blackboard LMS. The gathering of faculty to brainstorm for solutions that resulted in new unpredictable possibilities to operate the Blackboard LMS features shows how faculty practiced experiential learning.

I describe collaborative learning in the workplace to be a valuable asset that allows people to brainstorm together in small or large groups to fix organizational problems. In the findings, faculty members provided details about their small informal group gatherings at STC to discuss resolutions to various situations and to help each other learn how to use the features. Research has shown that small group learning helps improve academic achievement, encourage positive affects (attitudes, motivation, and lower anxiety), and promotes positive social effects (learning together) (Kirschner, Paas, & Kirschner, 2009; Wanga, Cheng, Chen, Mercer, &

Kirschner, 2017).   Beck and Bish's (2017) study confirmed that informal learning in groups cultivate people to learn from others and to learn with others.

Faculty members' willingness to come together through informal settings to converse about their dilemmas showed their cleverness to learn and adapt to the Blackboard LMS. Faculty members' collaborative meetings helped spread the word about the perceived usefulness and perceived ease of use for the Blackboard LMS. Rogers (1983) explained the fourth stage a social system, as a "kind of collective-learning system in which the experiences of the earlier adopters of an innovation, transmitted through interpersonal networks, determine the rate of adoption of their followers" (p. 67). Faculty members' discourse about the perceived usefulness and perceived ease of use of the Blackboard contributed to the rate of adoption with other faculty members during the technology adoption process.

The collaboration learning methods of faculty members can also be assessed through stage five-collaboration in the SoC model and stage five-integration in the LoU spectrum of CBAM. SoC stage five-collaboration takes place when users of an innovation are concern about how they are using the innovation compared to other users (Hall & Hord, 2011). LoU stage five-integration occurs when users work together to suggest adaptations that will make the innovation better the client (Hall & Hord, 2011). The findings revealed how faculty members expressed their concerns about using the Blackboard LMS features efficiently and reached out to their colleagues for support. It is evident that faculty members had more trust in each and the internet for solutions than STC Online Administrators. I concluded that faculty members' mistrust resulted from their experience with the formal training activities that STC Online Administrators design.

Faculty members utilization of collaborative learning combined with the situated cognition theory were essential learning styles that fostered supportive social learning environments. STC formal learning activities did not promote collaboration nor did the learning environments accurately replicate the operational steps faculty members would use to teach their classes. Researchers have indicated that formal learning activities do not always represent realistic practices that practitioners encounter and that practitioners learn best in socially situated learning contexts that combine practical design, collaboration, and public evaluation within formal learning environments (Brown et al., 1989; Catalano, 2015; Gomez & Lee, 2015; Harmon & Jones, 2000). Senge (2006) expressed that collaborative learning can be more insightful and meaningful than individual learning. I surmised from the findings that the collaborative efforts of faculty whether it was with the full-time instructors or an adjunct faculty member with her gatekeeper, the instructor no longer felt alone in her quest for knowledge to learn how to operate the Blackboard LMS.

Implications for Theory and Practice

The conclusions from this study have revealed that insufficient training preparation by higher education administrators compelled faculty to train themselves. The findings from this study add to the body of literature for adult education and human resource development field. The conclusions, findings, and existing literature lead to implications for theory and practice that will be discussed below.

Implications for Theory

The study findings contributed to the gap in the literature about faculty members' experiences and showed theoretical implications to examine faculty members' motivations during a technology adoption. Faculty members' formal learning activities were situated in an

environment that did not fully develop their adeptness to use the Blackboard LMS. The dilemma of adeptness extends the literature that the insufficient training processes for a technology adoption caused frustration and decreased faculty members' opinions of perceived ease of use (Asiri, Mahmud, Bakar, & Ayub, 2012; Baylen et al., 2012; Davis, 1989) with an LMS. The literature discusses dilemmas during a technology adoption as barriers such as faculty readiness, faculty compensation for time, legal ownership, technical support, instructional support for online faculty, self-efficacy to learn, and organizational support (Baylen et al., 2012; Betts & Heatson, 2014; Crews, 2017; Monett and Elkina, Muilenburg & Berge, 2001; Seaman, 2009; Varnell, 2016; Yancey, 2016). Scholars should investigate different institutions technology adoption process to learn different methods on how to avoid or overcome those barriers and develop a model that utilizes modern-day technology software and applications. Theorizing a model that focuses explicitly on higher education institutions can provide a foundation to why institutions change so often, why faculty should become accustomed to frequent LMS changes, and the benefits for all stakeholders involved in the constant LMS change.

Scholars that theorize why administrators in higher educational institutions make frequent innovation changes help "improve educators abilities to make the best judgments in practice" (Cervero & Wilson, 1994, p. 19). Researchers can also examine faculty members' experiences during a technology adoption through the transformational learning theory coupled with informal learning. Informal learning practices in the workplace are often explained with the 70/20/10 rule. The 70/20/10 rule posits that "70% of learning occurs through informal or on-the-job learning; 20% through mentoring and other developmental relationships; and the remaining 10% through formal learning including course work and associated reading" (Boileau, 2017, p. 5).

Implications for Practice

In higher education institutions, administrators need to understand that during a technology adoption process faculty members are key components to the learning process of an innovation. In this study, there were three implications for practice that emerged from the findings. First, faculty members need frequent high-quality formal training that will prepare them to use the innovation. Formal learning practices that are used to train faculty during a technology adoption process needs to be streamlined for faculty members that utilize the innovation in different ways. Senge (2006) stated a system diagram that illustrates the implementation process and how the system will work in different ways for different schools would be beneficial to the individuals affected by the change in an organization. Administrators can create, prior to a technology adoption, an LMS committee that will include change facilitators such as administrators, faculty, instructional designers, and information technology (IT) professionals to devise a plan that provides insight to implementation stages for small, medium, and large organizations.

A systems diagram provides two purposes for an LMS committee: (1) to see patterns of interdependency and (2) to see into the future (Senge, 2006). An LMS committee can use the patterns of interdependency to determine what areas in the institution will be affected and see the areas of weaknesses and strengths. The LMS committee can also devise a plan of action for immediate and future needs for stakeholders that will be affected by the technology adoption process. Moreover, higher education administrators should invite scholars that specialize in organizational change to assist with the implementation process. Scholars can assist with customizing organizational change directives for an institution.

Secondly, the findings of this study revealed the various challenges full-time faculty members faced compared to adjunct faculty members. Adjunct faculty members' concerns of not having adequate support affected their attitudes about the perceived usefulness and perceived ease of use for the new Blackboard LMS. More information is needed to learn about professional development activities, mentoring initiatives, and training practices that can be provided to adjunct faculty during a technology adoption process. The literature has few research studies that address adjunct faculty members' concerns, although, adjunct faculty members, which are also known as part-time faculty comprise 15% to 67% of faculty in higher education institutions (Coates, James, & Baldwin, 2005; MacFarland, 1998). As two-year public colleges continue to increase adjunct faculty to teach classes more information is needed to learn about the necessary instructional and technical support they need compared to full-time faculty during a technology adoption.

Lastly, when practitioners plan formal and non-formal training activities, the informal learning process needs to include activities that allow self-direct learning, collaborative learning, and feedback of progress for participants. This study uncovered that faculty members were compelled to initiate their self-directed learning and collaborative learning efforts to train themselves. Research studies exist about informal learning of technology, but few studies address the informal learning experiences of faculty members through self-directed learning strategies and collaborative learning practices during a technology adoption.

Limitations of the Study

This study was purposely limited to a State Technical College that is located in the Southeastern area of the United States. Hence, the findings of this study may differ if the same study was conducted at a different higher education institution that is located in another

geographic area. The sample size was small but within the standard range for a qualitative study. I was able to conduct two face-to-face interviews, and the other interviews were conducted over the phone to accommodate the participants' busy schedules. Although face-to-face interviews have been the dominant method to conduct interviews, telephone interviews are an acceptable method for participants convenience and to protect their privacy (Opdenakker, 2006; Sturges & Hanrahan, 2004). The findings have a researcher's bias because of my employment with STC; therefore, another researcher could interpret the findings differently.

Recommendations for Future Research

The need to continue research about technology adoptions is necessary because the information system field constantly changes and those changes in the 21st century affect the delivery of education at higher education institutions and organizations. The findings in this study were not to be generalizable beyond this bounded case but to inspire new inquiries for future research that will be discussed in this section. My first recommendation is to conduct a similar study at other state technical colleges and four- year institutions in other geographic areas of the United States to determine if there were similar or dissimilar faculty experiences. My second recommendation is to investigate the experiences of instructional designers and /or faculty committees that contribute to the design of a new LMS before it is released to the remaining faculty to be trained. What do instructional designers and/or faculty committees experience during the primary stages of selecting and designing an LMS? My last recommendation is to conduct an action research study within an educational system or an organization to evaluate training practices for a technology adoption. These recommendations would contribute to the literature for adult education and human resource development fields to improve future practices.

Chapter Summary

This chapter provided the conclusions, discussions, implications, and recommendations for this case study. There were two conclusions derived from the findings: (1) The common learning experiences of the group were frustrating and did not sufficiently fulfill the needs of the participants and (2) Faculty navigated the requirement to learn a new system by using their prior knowledge as educators to create a process of self-directed, collaborative learning approaches, and looked beyond the management system that was assigned to examine similar systems that more directly served their needs. Implications for theory and practice were explained for the adult education and human resource development fields. The theoretical frameworks that shape this study were intertwined within each section to explain the contributions made to the literature. I presented in authenticity the various limitations of the study and I posit recommendations for theory and practice.

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APPENDIX A

Interview Questions

- Tell me how you came to be a college educator and working at the technical college

  level?

- How long have you been teaching?

- What department do you work in?

- What method (face-to-face, hybrid, or online) of classes do you teach?

- Which method of teaching do you prefer?

  o If you have a preferred method explain to me why?

- What prior experience did you have with any brand of an LMS as a student and/or faculty

  before learning the Blackboard system?

  o If yes, tell me the brand?

  o How did you learn to use that particular learning management system?

- What formal learning (training) did you complete here at STC before the launch of the

  Blackboard system?

- Explain how effective the formal learning sessions were in learning to manage the

  Blackboard system.

- How useful were the Blackboard learning webinars before the launch in 2016?

- How well prepared did you fell the first time in teaching a class using the Blackboard

  system in 2016?

- How often in your personal time, did you try to learn the Blackboard system before using it in 2016?

    o If yes, what time in the day would you experiment with the Blackboard system?

- What assumptions did you have about the technology adoption process of the Blackboard system before the launch in 2016?

- How many formal Blackboard learning sessions did you attend in 2017?

- In what ways have the formal Blackboard learning sessions helped you?

- How many Blackboard learning webinars have you viewed in 2017?

    o If yes, how the webinars were beneficial to you in learning the Blackboard system.

- In what ways did, the Blackboard learning management system webinars helped you.

- What support systems did you rely on when you encountered a problem when using the Blackboard system? Why?

- What challenges did you encounter in learning the Blackboard system?

- What recommendation(s) would you give to administrators before a technology adoption?

- Is there anything else that you would like to add that might help in understanding your experience in the technology adoption through the formal learning process?

APPENDIX B

Recruitment Letter

June 12, 2018

Re: A case study of faculty technology adoption of a new learning management system

Greetings State technical college Faculty

I am Marice Jackson, a doctoral student in the Learning, Leadership, and Organizational Development at the University of Georgia. I am writing to invite you to participate in my research study on faculty formal and informal learning experiences at a state technical college that experienced a technology adoption of the Blackboard learning management system. This study seeks to understand your formal learning (training) experiences in the technology adoption of a new learning management system. I also see to understand your informal learning (self-directed) experiences in acquiring knowledge on how to operate and manage the new learning management system.

To be eligible for this study:

1. Participants have to be full-time or adjunct faculty at STC
2. Participants must have taught a class (face-to-face, hybrid, or online) using the Blackboard system at STC during the years 2016 - 2017.

If you decide to participate in the study, you will take part in an interview that will last between 30 minutes to an hour. I will conduct all interviews and faculty will remain anonymous. Interviews can be conducted in-person, via telephone, or through Skype at a convenient time for you. The information I am seeking will be beneficial to administrators and organizational leaders in higher education.

As an incentive, a five-dollar gift card to Chick-fil-A will be given to those that are interviewed. If you would like to participate, please contact me at maricej@uga.edu or ███████████████.

Thank you very much.

Sincerely,

Marice Jackson
Ph.D. Candidate
University of Georgia

APPENDIX C

Consent Letter

OUT WITH THE OLD AND IN WITH THE NEW: A CASE STUDY OF FACULTY TECHNOLOGY
ADOPTION OF A NEW LEARNING MANAGEMENT SYSTEM

Dear STC Faculty,

I am Marice Jackson, a graduate student at the University of Georgia and I invite you to participate in my
dissertation research study. Before you decide to participate in this study, it is important that you understand
why the research is being done and what it will involve. This form is designed to give you the information
about the study so you can decide whether to be in the study or not. Please take the time to read the following
information carefully. Please ask questions if there is anything that is not clear or if you need more information.
When all your questions have been answered, you can decide if you want to be in the study or not. This process
is called "informed consent." A copy of this form will be given to you.

Principal Investigator: Dr. Juanita Johnson-Bailey
University of Georgia
Tel: ▮▮▮▮▮▮▮▮▮
E-mail: jjb@uga.edu

Purpose of the Study

The delivery of distance education to adult learners has progressed because of the Internet. The delivery method
of distance education changed due to learning management systems that faculty use to facilitate their classes.
When a higher education institution has decided to adopt a new learning management system, there are
challenges that faculty may encounter before, during, and after the technology adoption. The purpose of this
study is to examine faculty formal and informal learning experiences at a state technical college that
experienced a technology adoption of the Blackboard Learning Management System. Two research questions
will guide this study: (1) What were the formal learning experiences of faculty in the adoption of a new learning
management system? (2) What were the informal learning experiences of faculty in the adoption of a new
learning management system?

To be eligible to participate in the study, you have to be a full-time or adjunct faculty member at STC and
taught a class (face-to-face, hybrid, or online) using the Blackboard system at STC during the academic year
2016 - 2017. Additionally, you will be asked to answer questions about your age, gender, and job title.

Study Procedures

If you agree to participate, you will be asked to …

- Participate in a 30 – 60 minute face-to-face interview at a mutual agreed location and time. The interview will be audio-recorded and transcribe for accuracy.
- A pseudonym will be assigned for you to protect your identity. You may provide written documentation about your experience such as personal notes or training materials during or after the interview.
- You may be asked for a follow-up interview that will be recorded and will take no longer than 15 – 30 minutes if needed. The follow-up interview will be transcribed for accuracy.

Risks and discomforts

I do not anticipate any risks or discomforts for participating in this research study.

Benefits

The direct benefit will be for administrators, instructional designers, and learning management system faculty committees to understand the barriers that faculty encounter and what support systems should or should not continue during a technology adoption of an LMS. The study will add to the literature about the formal and informal practices that will be valuable for faculty professional development. Furthermore, when faculty members have self-efficacy in using the learning management system, their confidence will show to their students that will help build professional student-teacher relationships.

Incentives for participation

If you participate in the study, you will be provided with a $5 Chick-fil-A gift card upon completion of your interview.

Audio/Video Recording

Participants' interviews will be audio recorded to ensure the accuracy of data collection and transcription process. I will maintain the audio recordings in a password-protected digital software and will destroy the audio recordings after the completion of my dissertation.

Additionally, if you participate in this study the audio recordings and written documents will be used for publication, and the pseudonym for you will be used.

Privacy/Confidentiality

All personal identifiers (e.g., name, email address, and documents) gathered in the data collection phase will be kept strictly confidential and stored in a secured password location. Only the researcher, principal investigator, and research methodologist will have access to personal identifiable data and will not be released without your written consent unless required by law. The recordings will be kept in a secured location for three years and then will be destroyed.

Taking part is voluntary

Participation in this study is voluntary. You may refuse to participate before the study begins, and discontinue at any time, with no penalty or loss of benefits to which you are otherwise entitled. If you decide to withdraw from the study, the information that can be identified as yours will be kept as part of the study and may continue to be analyzed, unless you make a written request to remove, return, or destroy the information.

If you have questions

The main researcher conducting this study is Dr. Juanita Johnson-Bailey and Marice Jackson at the University of Georgia. Please ask any questions you have now. If you have questions later, you may contact Dr. Juanita Johnson-Bailey at jjb@uga.edu or at ▮▮▮▮▮▮▮▮. You may contact me at maricej@uga.edu or ▮▮▮▮▮▮▮▮▮▮. If you have any questions or concerns regarding your rights as a research participant in this study, you may contact the Institutional Review Board (IRB) Chairperson at ▮▮▮▮▮▮ or irb@uga.edu.

Research Subject's Consent to Participate in Research:
To voluntarily agree to take part in this study, you must fill out the brief survey below and sign on the line below. Your signature below indicates that you have read or had read to you this entire consent form, and have had all of your questions answered.

Gender _____ Job Title _____ Age _____

_____   _____   _____
Name of Researcher   Signature   Date

_____   _____   _____
Name of Participant   Signature   Date

Please sign both copies, keep one and return one to the researcher.

APPENDIX D

Invitation Research Flyer

STC Faculty,

Would you like to earn a $5 gift card to Chick-fil-A? All you have to do is contact Marice

Jackson at <u>maricej@uga.edu</u> or ▮▮▮▮▮▮▮▮▮▮ to determine if you qualify to participate

in a 30 – 1-hour interview at a convenient time for you about your formal and informal learning

experiences in the technology adoption of the Blackboard Learning Management System.

*** GIFT CARD to Chick-fil-A ***