RESIDENTIAL FACULTY MEMBERS' DIFFERENTIAL USE OF BLACKBOARD TOOLS: A CASE STUDY

by

Stephen Mwendwa Kitoo

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Philosophy

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APPROVED BY:

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ABSTRACT

The purpose of this single instrumental case study was to understand the differential use of Blackboard tools for residential faculty members at a large private nonprofit university in the Southeastern part of the United States. The differential use of Blackboard tools was generally defined as the tendency of residential faculty members in universities to use certain Blackboard tools over others available to them. The theory that guided this study was the Unified Theory of Acceptance and Use of Technology (UTAUT) by Venkatesh, Morris, Davis, and Davis (2003) as it explained factors influencing faculty members' use of Blackboard tools. The central research question for this study was: Why do residential faculty members select certain Blackboard tools to integrate into their courses more than others? Participants were residential faculty members, information technology administrators and designers, and faculty support coordinators drawn from a large private nonprofit university in the Southeastern part of the United States. Data was collected using interviews, focus groups, and document analysis. Data were analyzed both manually and using NVivo computer software to find codes and themes that explained the causes of the phenomenon. The key themes answering the central question of this study are time, Blackboard, requirements, social support, and fear. Sub-question one was answered by Blackboard and motivation themes. Social support, technical team and support, and requirements are addressed in the second sub-question. The third sub-question was answered by the following themes: Blackboard, requirements, and technical team and support. Theoretical, empirical and practical implications and recommendations are offered.

Keywords: Blackboard, residential faculty members, higher education, learning management systems, qualitative

Copyright Page

Dedication

I dedicate this dissertation to my dear wife, Joy, and our lovely children, Muuo and Mwende.

May it be an inspiration to our children and children's children.

I dedicate it also to my parents Mr. and Mrs. Ancient Kitoo Ngoleni and many others who longed to see their children through school by every means.

Lastly, I dedicate it to teachers across the educational system in their commitment to making their students' learning experience meaningful and impactful.

Acknowledgments

Dissertation writing is an arduous process that took the encouragement and support of many people to complete. While it is not feasible to personally thank all the persons that were involved in one way or another in my doctoral journey, the following persons deserve acknowledgment.

First, I thank God and father of our Lord Jesus Christ for allowing me to get to this stage in my life. May this dissertation result in His glory and the advancement of the kingdom.

I thank my dissertation committee for working with me to put together this manuscript. I thank my chair, Dr. Collins, for guiding me through the dissertation writing process. Her swift responses and keenness to detail were just what I needed to get ahead. I thank Dr. Barnett for her expert advice and guidance during the process.

Words fail me in describing the significant role my wife Dr. Joy Mwendwa played in this doctoral journey. Among others, she supported me with her prayers and words of encouragement. She acted as my sounding board when I reflected on what I was learning. She took care and managed our home while I was studying. Alongside this, I thank my children, Muuo and Mwende for their smiles and being an inspiration to working on this project.

My dream of pursuing a doctoral degree can be traced back to my parents Mr. Anicent and Mrs. Josephine Ngoleni. Their passion and investment in education motivated me to go for the doctorate. They have been keen to encourage me along the way.

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I also thank my siblings, my relatives, and many church folks whose prayers and spiritual support served to motivate me to persist to the end.

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List of Abbreviations

Center for Academic Development (CAD)

Center for Teaching Excellence (CTE)

Desire to Learn (D2L)

Graduate Student Assistant (GSA)

Higher Education Institutions (HEIs)

Illinois Automatic Computer (ILLIAC)

Information Technology (IT)

Institutional Review Board (IRB)

Learning Management System (LMS)

National Center for Education Statistics (NCES)

Programmed Logic for Automated Teaching Operations (PLATO)

Technology Acceptance Model (TAM)

Theory of Reasoned Action (TRA)

Unified Theory of Acceptance and Use of Technology (UTAUT)

United States (US)

CHAPTER ONE: INTRODUCTION

Overview

Higher education institutions (HEIs) are now dealing with a vast number of students. The National Center for Education Statistics (NCES, 2018) noted a 37% increase in the number of undergraduate students between the years 2000 and 2010. Between the years 2010 and 2017, 4-year institutions recorded a 2% increase in the number of undergraduate student enrollment (National Center for Education Statistics, 2019a). This has pushed HEIs to think of new ways to accommodate the soaring enrollment while still maintaining quality standards (Bastedo & Bowman, 2017; Selingo, 2017). Technology and the internet have contributed to lessening the challenges that come with the massification of higher education. More students can be accommodated in an online platform compared to the traditional face-to-face setup. Among the various pieces of technology, the learning management system (LMS) has been widely adopted among institutions of higher education globally (Chow, Tse, & Armatas, 2018; Schoonenboom, 2014). Statistics show that 99% of HEIs use an LMS for teaching and learning (Dahlstrom, Brooks, & Bichsel, 2014; Lang & Pirani, 2014). With the wide adoption of LMSs in HEIs, it is increasingly becoming necessary for faculty members to have the requisite competencies of delivering education through virtual learning systems (Chow et al., 2018). Studies have shown that 85% of all faculty members use their institution's LMS for some of their teaching (Dahlstrom et al., 2014).

This chapter introduces the study by identifying the problem, the purpose, the study's research questions, and the significance of the research. Also included in this chapter is the situation to self and a summary.

Background

Given the varied products available in the higher education LMS market, Blackboard has had a greater market share in the United States (US) market until mid-2018 when Canvas overtook it (Menard, 2020). Blackboard is still more widely used among institutions of higher education in the US and Canada (Dahlstrom et al., 2014; Hill, 2019; Menard, 2020). Outside North America, Blackboard comes second to Moodle (Hill, 2017). The historical, social, and theoretical contexts of the development of Blackboard LMSs are discussed in this background section.

Historical Context

The use of LMSs dates to the 1960s when a computer-assisted program, Programmed Logic for Automated Teaching Operations (PLATO), was introduced to the market at the University of Illinois (Dobre, 2015). Using PLATO, several students could be taught together through one computer known as Illinois Automatic Computer (ILLIAC). Individual students were provided keysets and a television display through which they could view slides and answer questions prompted by the computer (Bitzer, Braunfeld, & Lichtenberger, 1961). After this development and with the advent of the internet and computers, strides were made to use the internet and computers for learning purposes. For example, in 1990, SoftArc launched First Class LMS that ran on Macintosh computers, unlike the previous that ran on mainframe computers. First Class enabled users to communicate and collaborate. In 1997, CourseInfo developed the Interactive Learning Network and installed it on computers at Yale and Cornell universities. That same year, Blackboard was founded (Bradford, Porciello, Balkon, & Backus, 2007; Chaubey & Bhattacharya, 2015).

Currently, there are various kinds of LMSs available in the market. An LMS can be grouped into three categories: proprietary, open-source, and cloud-based LMS (Dobre, 2015; Wright, Lopes, Montgomerie, Reju, & Schmoller, 2014). Proprietary LMS are developed for commercial purposes. Since they are centralized and controlled by the hosting company, this makes proprietary LMSs a closed system. The hosting company can customize the LMS to meet an institution's unique needs. Since users pay to obtain the service, the developers maintain ongoing support for the system. The Blackboard LMS is an example of a proprietary LMS. Other examples of proprietary LMSs are Desire to Learn (D2L) and eCollege (Dobre, 2015; Wright et al., 2014).

Compared to the proprietary LMS open-source LMS are free, easy to use, and have less administrative restrictions. Similar to the proprietary LMS, open-source LMS allows users the freedom to customize the LMS to suit their needs. Examples of open-source LMS are Moodle, Sakai, and Canvas (Chaubey & Bhattacharya, 2015; Wright et al., 2014). The downside with open source LMS, however, is that there are other costs related to hosting and managing the LMS. Institutions using these kinds of LMS must procure their own servers (together with hiring skilled staff to manage them) or outsource them for a fee. Further, since open-source LMSs are developed by a community, there is no one to bear responsibility in event of a mishap with the system (Wright et al., 2014). Canvas is the greatest LMS competitor of Blackboard in the US and Canada while Moodle is the leading LMS in Europe, Latin America, and Oceania (Australia, New Zealand, and surrounding island countries) (Hill, 2017, 2019).

Cloud-based LMS uses cloud computing features to support teaching and learning. Such LMS requires the availability of the internet and an electronic device (computer, smartphone, or tablet) to run. Cloud-based LMS are preferred because institutions do not need to make an

investment in acquiring software and hardware to support the system. Further, cloud-based LMS are cost-effective, easy to use, and customizable to meet institutional needs. Notwithstanding, cloud-based LMS are susceptible to hacking and breaching copyright laws in an attempt to disseminate learning materials. The availability and speed of the internet may affect the learning process. Examples of cloud-based LMS are Digital Chalk, Docebo, Litmos LMS, Talent LMS, and WizQ among others (Aldheleai, Bokhari, & Alammari, 2017; Dobre, 2015; Wright et al., 2014).

The Blackboard LMS was established in 1997 to support the ongoing demand for online education. Initially, Blackboard was set up as a platform for faculty members to upload their course syllabi and study materials for easy accessibility by students. The main goal was to optimize students' learning experiences online by making education accessible anywhere to students enrolled in a course (Bradford et al., 2007; Dahlstrom et al., 2014). Over the years, Blackboard has developed different tools that can be used for content management and interaction with or among students. There is a vast array of Blackboard tools an institution may use depending on their needs and choice. The different tools, mentioned here but elaborated on in greater detail in Chapter Two, can be classified into content management tools and interaction or collaborative tools. Some of the content management tools include announcements, course content, and mashup. Examples of some interaction or collaborative tools include discussion boards, blogs, journals, wikis, and Blackboard Collaborate (Chow et al., 2018; Schoonenboom, 2014).

Social Context

Given the burgeoning numbers of students in HEIs, the mode of teaching, the nature of the student, and the role of residential faculty members are changing. The nature of the student

is changing to include non-traditional students and digital natives. Compared to the traditional students, non-traditional students have some of or all of the following characteristics: (a) they are 25 years old or older, (b) they work full-time (or at least 35 hours a week), (c) they are part-time or full-time students, (d) they have joined school after being away from school for a period, and (e) they have a family. Though they show more commitment to education than the traditional students, non-traditional students have comparably lower graduation rates (Markle, 2015; Wood, 2017). Since non-traditional students are juggling distinct roles at work, family, and school, learning in an online platform gives them an opportunity to learn at their own pace, convenience, and time (Johnson, 2015).

Going by age, current college students can also be described as being digital natives. This is so considering that the majority of college students are aged between 18 and 24 years. For example, the fall 2015 enrollment statistics indicated that 86% of all full-time undergraduate students at 4-year institutions were young adults (aged below 25 years) (McFarland et al., 2018). The fall 2017 enrollment statistics indicated that 90% of all full-time undergraduate students at 4-year public institutions were aged below 25 (NCES, 2019a). Currently, in 2019, some of the 18-24-year-old students would either be categorized as millennials or post-millennials (also known as generation z). Millennials refer to the people who were born between the years 1981 and 1996 while post-millennials are those born in 1997 and thereafter (Fry & Parker, 2018). Digital natives refer to a generation of learners who have grown up around the technology and the internet. Millennials and post-millennials have grown around technology (Jiang, 2018). Being the main drivers of social networking, they communicate more via social media using various kinds of electronic devices (Cunningham, 2007; Perna & Ruiz, 2016; Prensky, 2001). Studies have shown that digital natives use various communication skills more for personal and

entertainment ends and less for educational purposes; some scholars have observed that the extensive use of various kinds of technology may be disruptive to learning (Kennedy & Fox, 2013; Lepp, Barkley, & Karpinski, 2014; Rashid & Asghar, 2016). Since they know how to use various kinds of technology, digital natives stand a better chance to appreciate and utilize the diverse kinds of educational technology tools. Digital natives' communication and technical skills should be harnessed for positive academic purposes (Rashid & Asghar, 2016).

The mode of teaching is shifting from traditional face-to-face to blended and online interactions (Dobre, 2015; Schreurs & Dumbraveanu, 2014). The traditional approach is teacher-centered: teachers decide on what to teach, how to teach it, and how to assess. Learning happens face-to-face. Furthermore, learners assume a passive role of receiving the content while the teachers assume an active role focused on covering the course syllabus (Schreurs & Dumbraveanu, 2014). Currently, learning is moving towards being learner-centered where the focus is on the expected outcomes that the student should be able to achieve at the end of the course. In this approach, students are given an opportunity to construct knowledge. Learning management systems have features that support the learner-centered approach, constructivism, and student-to-student and student-to-faculty interaction and collaboration among students (Dobre, 2015; Schreurs & Dumbraveanu, 2014).

The role of faculty members at HEIs is also changing from being the *sage-on-the-stage* to *guide-on-the-side*. The role of the teacher in a learner-centered approach is to provide an enabling environment for the student to construct knowledge. They do this by providing relevant content, asking thought-provocative questions, and engaging students in teamwork and collaborative discussions with other learners. Learning management systems can minimize the challenges associated with these changes in higher education (Schreurs & Dumbraveanu, 2014).

Theoretical Context

Past literature investigated the problem using the technology acceptance model (TAM) lens that explains the user's intentions to use a piece of technology. The technology acceptance model holds that users form an attitude and use technology based on the ease of use and perceived usefulness of the technology. Past research, which was mostly quantitative in nature, investigated the intentions of faculty members in adopting technology based on these constructs (Chow et al., 2018; Fathema, Shannon, & Ross, 2015; Rienties, Giesbers, Lygo-Baker, Ma, & Rees, 2016). Given the wide adoption of LMSs in HEIs, questions have been raised as to the necessity of investigating their intention to use LMSs (Rienties et al., 2016; Sinclair & Aho, 2018). This study went beyond these constructs to understand why residential faculty members selected to use certain Blackboard tools over others.

Situation to Self

As an educator, I am motivated to pursue this study because I take the role of teaching seriously—because teaching involves the lives of students who I will influence in multiple ways. For this reason, I believe that residential faculty members' interaction with students is important because it enhances the teaching and learning process. I am also motivated to pursue this study because I believe that residential faculty members play a crucial role in the teaching and learning process, and therefore, they need support in order to discharge their roles effectively. I also believe that teaching is a calling, which I believe I possess based on my abilities, training, and experience. In the next sections, I will highlight my philosophical assumptions and paradigm that I bring in to this research.

Philosophical Assumptions

Ontology has to do with the nature of reality. As a qualitative researcher, I believe there are multiple realities seen from different perspectives by different people inside and outside this study. As a researcher, my role will be to articulate these multiple realities by collecting data from different individuals within the context under study and identifying the themes by citing direct quotes from the participants in the final report. Since qualitative research requires an in-depth understanding of the phenomenon, I will use purposeful sampling to identify information-rich participants for the study. Unlike a quantitative study, the aim of qualitative research is the depth and not breadth, and therefore, fewer participants are chosen for the study (Creswell & Poth, 2018; Patton, 2015). In this study, I collected data from 12 participants using interviews, focus groups, and conducted document analysis. The participants were drawn from residential faculty members, information technology (IT) designers or administrators, and faculty support coordinators.

Axiology has to do with values. Researchers hold certain values that they bring into research (Patton, 2015; Stake, 1995). An axiological assumption that I bring to this study is the belief that human beings are by nature worthy of respect and therefore should be treated that way. This value guided the way I interact with different people during this study. Another axiological assumption I hold is a propensity for honesty. I value being truthful in my interactions with both people and information. In this study, I ensured that I acknowledged all the sources utilized in this study and all the data collected.

Rhetoric is "the art of speaking or writing effectively. It refers generally to how language is employed" (Firestone, 1987, p. 17). Rhetorical assumptions have to do with the language of research. In this study, I will employ the first person, active voice to provide a rich description

of the subjective meanings the participants ascribe to the phenomenon. I will also use quotes to engage the reader in searching for meaning from the participants' experiences (Firestone, 1987; Patton, 2015).

Paradigm

As a qualitative researcher, I tend towards the constructivist paradigm. Constructivists hold that people construct meanings as they interact with a situation in a given context. I have chosen a qualitative research method to understand the contextual factors that contribute to residential faculty members' differential use of Blackboard tools and what meanings they have constructed regarding this phenomenon. To gain an in-depth understanding of a phenomenon, I met with the participants in their natural settings, which allowed me to observe the context and gain an understanding of how the participants create meanings the way they do. This gave me an understanding of the contextual factors that contribute to residential faculty members' differential use of Blackboard tools. I used qualitative methods that provided my participants with an opportunity to describe their perspective on the phenomenon under investigation (Creswell & Creswell, 2018; Patton, 2015; Stake, 1995). Among the participants targeted in this study were residential faculty members and the people they work with (faculty support coordinators and IT administrators and designers). Among their other administrative responsibilities, faculty support coordinators work and assist faculty members (Ackerman & Parker, 2011).

Problem Statement

Education in both online and traditional face-to-face courses at institutions of higher learning is being delivered to the students using an LMS. Current literature indicates that the use of LMS is beneficial to the teaching and learning process (Rucker & Frass, 2017; Walker, Lindner, Murphrey, & Dooley, 2016). Dahlstrom et al. (2014) reported that "nearly three in four

faculty [members] say the LMS is a very useful tool for enhancing teaching (74%) and students' learning (71%)" (p. 10). Even as the benefits the LMS avails, studies also report that most LMSs are underutilized in that faculty members use certain features (tools) in LMSs more than others (Chow et al., 2018; Dahlstrom et al., 2014; Walker et al., 2016). The more commonly used LMS tools are those related to instruction, also known as content tools (content, announcement and discussion board tools). Content tools are used in the LMS to avail learning materials to students. It has been shown that faculty members rarely used interactive and collaborative LMS tools that are meant to engage and interact with students (Chow et al., 2018; Dahlstrom et al., 2014). The reasons for the differential utilization of these LMS tools are yet to be examined. Previous research has investigated this phenomenon using quantitative methods (Fathema et al., 2015; Rienties et al., 2016; Salajan, Welch, & Ray, 2015; Schoonenboom, 2014). Few studies provide an in-depth understanding of the context for the differential utilization of Blackboard tools (Howell, Roberts, Seaman, & Gibson, 2018; Sinclair & Aho, 2018). The problem investigated in this study was to gain a better understanding of the reasons behind the differential utilization of Blackboard tools.

Purpose Statement

The purpose of this single instrumental case study was to understand the differential use of Blackboard tools for residential faculty members at a large private nonprofit university in the Southeastern part of the United States. At this stage in the research, the differential use of Blackboard tools will be generally defined as the tendency of residential faculty members to use certain Blackboard tools over others. The theory guiding this study was the unified theory of acceptance and use of technology (UTAUT) by Venkatesh, Morris, Davis, and Davis (2003) as it explains factors influencing residential faculty members' use of Blackboard tools.

Significance of the Study

The significance of this case study was threefold. This study provided a further understanding of the differential utilization of Blackboard tools. This was important since up to this point few studies provided an in-depth understanding of the context regarding the identified phenomenon (Howell et al., 2018; Sinclair & Aho, 2018). Theoretically, this study further authenticated the validity and reliability of the UTAUT, which was developed by Venkatesh et al. (2003); it also suggested additions or improvements to the model. Finally, in a practical sense, this study unearthed some of the reasons why residential faculty members use certain Blackboard tools over others. This information will be useful to university administrators to know how to better support residential faculty members in the teaching and learning process. Previous studies showed that faculty members in some HEIs lacked support from the administration towards using Blackboard tools (Al Meajel & Sharadgah, 2018; Jorgensen et al., 2018). This study identified the gaps the university administration needs to close in a bid to support faculty members. The information will be useful to residential faculty members who need to understand or identify with the contextual factors influencing their use of the LMS for the benefit of their students.

Research Questions

I developed the research questions following a review of literature on the use of LMS tools and in line with the UTAUT model constructs. I formulated the questions early in the research process and I revised them along the way as the research progressed (Stake, 1995). Following a review of literature, I noted that some related studies used the TAM to find a solution to why faculty members used certain tools in LMSs more than others (Rucker & Frass, 2017; Salajan et al., 2015; Schoonenboom, 2014). The authors of the TAM later revised and

improved the model by incorporating other models, which resulted in the UTAUT model. Some other studies used the UTAUT model to examine faculty members' use of LMS tools (Moonsamy & Govender, 2018; Radovan & Kristl, 2017; Raman, Don, Khalid, & Rizuan, 2014). Since the UTAUT model is a later improvement of the TAM and conglomeration of other similar theories, I chose it to guide my quest for the differential use of Blackboard tools by residential faculty members. I, therefore, formulated the research questions guided by the theoretical propositions drawn from the UTAUT model (the model will be discussed further in the next chapter).

The central research question for this study was:

Why do residential faculty members select certain Blackboard tools to integrate into their courses more than others?

This central question was formulated following a review of the literature. While studies noted a gap in literature (being that faculty members often use LMS tools related to instruction and fewer LMS tools that are meant to interact with students outside the classroom (Chow et al., 2018; Dahlstrom et al., 2014; Walker et al., 2016)), the studies did not provide a solid explanation of the reasons behind their behavior. I, therefore, formulated the central question to investigate the contextual and personal reasons why residential faculty members exhibit this behavior. This central question will be explored using the sub-questions listed here below.

SQ1: What personal factors motivate residential faculty members to integrate certain Blackboard tools into their courses but not others that are available to them?

This sub-question is aimed at examining factors relating to the individual that fall within the effort expectancy and the performance expectancy constructs of the UTAUT model. Effort expectancy has to do with the easiness of using technology. In this study, effort expectancy

referred to residential faculty members' perceived easiness of using different Blackboard tools. Earlier quantitative studies have shown that faculty members use different Blackboard tools based on the easiness of use (Salajan et al., 2015; Schoonenboom, 2014). In this study, I sought a deeper understanding of how and why this is the case. Perceived ease of use is discussed under the theoretical framework when discussing self-efficacy. Venkatesh and Davis (1996) advanced that users' self-efficacy perceptions after direct experience with the technology will determine their perception of ease of use and usefulness of the technology. I will seek to understand how ease of use plays a part in residential faculty members' preference for certain Blackboard tools over others after a direct experience using the same (Venkatesh & Davis, 1996). On the other hand, performance expectancy refers to the extent to which users believe that the technology will aid in improving and enhancing their work (Moonsamy & Govender, 2018; Radovan & Kristl, 2017; Venkatesh et al., 2003). In this study, this question sought to understand how residential faculty members believe different Blackboard tools have contributed to improving their work.

SQ2: What external factors encourage residential faculty members to integrate certain Blackboard tools into their courses but not others that are available to them?

This sub-question seeks to understand how other factors beyond the individual have contributed to residential faculty members selecting to use certain Blackboard tools more than others. The social influence construct and the facilitating conditions construct of the UTAUT model will be examined as the external factors. Regarding the social influence construct, Venkatesh et al. (2003) asserted that users of technology would potentially use the same if significant others are using the technology. People important to a user of technology may differ depending on the context. In this study, I sought to gather from the participants whether their peers, the administration, or other persons in their environment have urged or influenced them

(or not) to use certain or various Blackboard tools. Facilitating conditions refer to the administrative and technical support that a user receives while using technology (Moonsamy & Govender, 2018). This question was used in this study to understand how residential faculty members received support from the administration and the technical staff—and how that support or lack of it contributed (or not) to their differential use of Blackboard tools.

SQ3: What factors do residential faculty members believe would encourage increased utilization of Blackboard tools that are currently underutilized?

This sub-question is based on the four constructs in the UTAUT model. Essentially, this question seeks to investigate whether there are factors that have discouraged residential faculty members from integrating certain Blackboard tools into their courses over others that are available to them. Faculty members will have a chance to speak on and make recommendations on what they need in order to integrate various Blackboard tools into their courses beyond what they have been in doing in the past.

Definitions

Some pertinent terms used in this study are defined for clarity.

1. *Blackboard tools* – This refers to the various functions within the Blackboard LMS meant to facilitate the teaching and learning process (Schoonenboom, 2014; Washington, 2017). The term Blackboard will be used in this document with the first letter capitalized to distinguish it from other kinds of blackboards.
2. *Blended learning* – This denotes an educational program that combines both traditional with online face-to-face teaching and learning methods. A class utilizing blended learning may also be called a hybrid course (Hamad, 2017).

3. *Collaborative learning* – This is a situation where two or more students work together on an academic project for learning purposes (Reid-Martinez & Grooms, 2018).
4. *Digital natives* – These students were born around the turn of the millennium and who have grown around technology and the internet (Cunningham, 2007).
5. *Digital immigrants* – These refer to people who were born before the digital age and digital technology (Prensky, 2001).
6. *Faculty* – While the term faculty has been used to describe academic staff who are hired to teach students in an academic institution (both K-12 and post-secondary level education) (Dahlstrom et al., 2014), several studies have used the term faculty to refer to teaching staff at a university-level institution irrespective of their rank and employment status in the university (Al Meajel & Sharadgah, 2018; Fathema et al., 2015).
7. *Higher education institutions (HEIs)* – This term refers to both 2-year and 4-year colleges or universities whether public or private offering post-secondary education (Al-Naibi, Madarsha, & Ismail, 2015). In this study, the term was used alongside the term university to refer to academic institutions offering 4-year degree programs.
8. *Learning analytics* – This refers to the collection, analysis, and reporting of data collected from the students' information systems to be used for purposes of improving the student learning experience (McKee, 2017).
9. *Learning management system (LMS)* – This is a computer software program that is also a digital platform that enables the development and delivery of educational

content and interaction between different users (students to students and students with faculty members) (Alshammari, Ali, & Rosli, 2016; Tawalbeh, 2018).

10. *Non-traditional students* – These are students who are 25 years and older who have joined college after being away for some time, they have a family, they and are working full-time (Markle, 2015; Wood, 2017).
11. *Online education* – This is education that happens or is delivered via the internet. The term e-learning may be used in this study in its place (Aparicio, Bacao, & Oliveira, 2016; Mohammed, Kumar, Maina, & Shuaibu, 2017).
12. *Residential faculty* – This term will be used to describe faculty members who teach in physical classrooms or face-to-face learning environments and who have the power to structure their courses (Gomez, 2015).

Summary

This chapter introduced the study by providing a background understanding of the topic. Institutions of higher learning are experiencing increased enrollment. Learning management systems have aided in accommodating the academic needs of the vast number of students. Even with the advantage of being able to manage the academic needs of the massive numbers of students in a virtual environment, residential faculty members have not fully utilized the various tools in the LMS. The problem identified in this study was a limited understanding of the reasons behind the differential utilization of Blackboard tools by residential faculty members at institutions of higher education. This study, therefore, sought to understand the differential utilization of Blackboard tools by residential faculty members at a large private nonprofit university in the Southeastern part of the United States. This single instrumental case study sought to provide an in-depth understanding of the differential utilization of Blackboard tools by

residential faculty members using three sub-questions. My motivations for conducting this study were rooted in my philosophical assumptions and my belief that residential faculty members play a crucial role in the teaching and learning process, and therefore, they need support in order to discharge their roles effectively. This study was significant in that it provided a further understanding of the differential utilization of Blackboard tools and unearth some of the reasons why residential faculty members used certain Blackboard tools over others. The central research question for this study was: Why do residential faculty members select certain Blackboard tools to integrate into their courses more than others?

CHAPTER TWO: LITERATURE REVIEW

Overview

This chapter presents a review of the theoretical framework and relevant literature and current research on faculty members' differential use of Blackboard tools in a higher education setting. The theoretical framework section discusses the theories that guide the direction of the research. The theories discussed in this chapter are the technology acceptance model (TAM) and an extension of it, and the unified theory of acceptance and use of technology (UTAUT). The literature review section synthesizes what current research has been addressed. The major topics discussed in this section include the benefits of Blackboard LMS, the challenges related to the LMS, the role and the needs of faculty members on the LMS, and motivations to use the LMS. A summary section is included which condenses the key ideas discussed in this chapter.

Theoretical Framework

In a qualitative study, a theoretical framework may be used as a lens to guide the researcher on critical issues needing further study. A theory in qualitative research, therefore, "becomes the transformative perspective that shapes the types of questions asked, informs how data is collected and analyzed and provides a call for action or change" (Creswell & Creswell, 2018, p. 62). In this study, the UTAUT model was used to guide the direction of the research. The UTAUT model has roots in the TAM. I discussed both of these models in this chapter to show how they related to this study's problem and research questions.

The Technology Acceptance Model

The technology acceptance model (TAM) was originally developed to explain workers' attitudes regarding adopting the use of recent technology in the workplace. Around the time it was developed, workers were lethargic in adopting technology in the workplace (Venkatesh &

Davis, 1996). The TAM postulated that when presented with recent technology, users form a behavioral intention to use it before they use it. The behavioral intention to use technology is influenced by a person's attitude about the system or technology. Users' attitude about a new system or piece of technology is informed by two factors—the users' perceived ease of use and perceived usefulness of the technology. In other words, the users' perceived ease of use and perceived usefulness of the technology informs their behavioral intention to use the technology. The perceived ease of use refers to the users' belief that a piece of technology needs minimal effort to use. Users perceive a piece of technology useful if it will aid in improving their performance at work (Davis, 1989; Venkatesh & Davis, 1996; Venkatesh et al., 2003).

The TAM was derived from the theory of reasoned action (TRA) model that was developed by Martin Fishbein in 1967 (and developed further by Martin Fishbein and Icek Ajzen in 1975). The TRA held that there was a relationship between a person's intentions and behavior. The TRA model hypothesized that a person's behavior is determined by their behavioral intention. A person's behavioral intention is a function of their attitudes and subjective norms. Attitudes refer to what the person believes regarding the outcomes of the action while subjective norms refer to what the person believes about other significant persons' approval or disapproval of the behavior (Fishbein, 1967; Fishbein & Ajzen, 1975). In his study, Davis (1989) did not find a strong relationship between attitude and a user's perceived ease of use and perceived usefulness of the technology. Later on, however, Venkatesh and Davis (1996) connected the perceived ease of use and perceived usefulness of technology to a user's beliefs (attitude and intention to act) in their technology acceptance model theory.

The TAM is also based on the social cognitive theory of self-efficacy (Venkatesh & Davis, 1996). Self-efficacy refers to a person's perception of their ability to perform certain

tasks based on their direct experience of a situation. The concept of self-efficacy is entrenched in the social cognitive theory that was advanced by Albert Bandura, who saw a connection between a person's self-efficacy and their behavior (Bandura, 1977). Applying it to technology, Venkatesh and Davis (1996) related self-efficacy to the perceived ease of use, a construct in their technology acceptance model. They argued that users could judge their computer self-efficacy by comparing their experience before and after using the system. Depending on how users judge their computer self-efficacy skills after hands-on experience using the technology, the user would be more predisposed to accept and use the piece of technology or not. Venkatesh and Davis (1996) proposed training as a catalyst for increasing self-efficacy, and therefore, enhancing acceptance of the system.

Studies confirmed the perceived ease of use and the perceived usefulness of the technology constructs that form the TAM to be valid (Rucker & Frass, 2017; Salajan et al., 2015; Schoonenboom, 2014). Those studies found that faculty members evaluated the ease of use and the usefulness of LMSs before they developed an intention to use and then actually using the technology.

A limitation of the TAM I noted is that it focuses more on the behavior to use technology and less on the technology used. The behavior of the users is measured by their perception about the technology such that if users perceive that the technology will be easy to use and that it will be useful to them, they will more than likely adopt and use the system (Venkatesh & Davis, 1996; Venkatesh et al., 2003). Furthermore, while the TAM has been widely utilized to predict users' intention to use technology, other constructs were identified as affecting or influencing users' intention to adopt and use technology. Because of this fact, the original authors of the

model acknowledged that the original TAM was limited in terms of explanatory power (Lai, 2017).

Extension of the Technology Acceptance Model

An extended model of TAM was developed to address the weaknesses noted in the original model. While the TAM has been widely used to predict users' intention to use a piece of technology, other constructs have been examined alongside the model to confirm whether they too affect users' intention to adopt and use a piece of technology. For example, Fathema et al. (2015) examined three external variables (system quality, perceived self-efficacy, and facilitating conditions) to verify whether they affected faculty members' decision to use an LMS. Their study found that indeed the three constructs influenced the faculty members' beliefs and attitudes, and therefore, affected their decision to use an LMS in institutions where the use of an LMS was optional.

Following suggestions from other scholars that the original TAM was insufficient to explain all the factors that influenced users' behavioral intention to use technology, Venkatesh and Davis (2000) developed an extended model of TAM that they also referred to as TAM-2. In this extended model, they identified variables that influenced how users accepted to use a piece of technology; they categorized them into two groups: social influence processes and cognitive instrumental processes. Variables within the social influence processes include subjective norm, voluntariness, and image. Variables included in the cognitive instrumental processes are job relevance, output quality, result demonstrability, and perceived ease of use. The TAM-2 was later enhanced into the unified theory of acceptance and use of technology (UTAUT) model (Venkatesh & Davis, 2000; Venkatesh et al., 2003).

Unified Theory of Acceptance and Use of Technology Model

The UTAUT model was developed by Venkatesh et al. (2003) following suggestions for improvement from scholars who attempted to explain the acceptance of technology using the original TAM or other relevant models. The UTAUT model was developed by comparing the following eight models: "the theory of reasoned action, the TAM, the motivational model, the theory of planned behavior, a model combining the TAM and the theory of planned behavior, the model of PC utilization, the innovation diffusion theory, and the social cognitive theory" (Venkatesh et al., 2003, p. 425).

From these theories, four key constructs and four moderators were identified to explain users' intention to use recent technology. The four constructs that determine users' intention and usage of technology are performance expectancy, effort expectancy, social influence, and facilitating conditions. The key moderating variables affecting that behavior are gender, age, voluntariness, and experience (Lai, 2017; Venkatesh et al., 2003). Performance expectancy refers to a user's belief that technology will help accomplish their work efficiently. Effort expectancy refers to the user's belief that technology is easy to learn and easy to use. Social influence has to do with the belief that other significant persons (coworkers and bosses) think that the user should use the technology. Facilitating conditions refer to the user's belief that there is sufficient organizational and technical support necessary for using the technology (Lai, 2017; Raman et al., 2014; Venkatesh et al., 2003).

The four constructs can be grouped into personal and organizational categories. Personal factors are those that pertain to the individual user while organizational factors are those appertaining to the institution. Coleman and Mtshazi (2017) grouped them into internal and external factors where internal factors refer to such that appertain to the individual person and

external factors “refer to obstacles existing in the external environment around us that impede staff’s use of an LMS” (p. 34).

Previous studies have used the UTAUT model to examine faculty members’ intentions to use an LMS (Moonsamy & Govender, 2018; Radovan & Kristl, 2017; Raman et al., 2014). The results of their study validated the constructs of the UTAUT model. However, different studies identified one of the four constructs as being a stronger predictor of faculty members’ intentions to use an LMS than the other three constructs. For example, Moonsamy & Govender (2018) found that facilitating conditions to be a stronger predictor of faculty members’ intention to use an LMS while Radovan and Kristl (2017) found social influence to be most significant. Since the studies are quantitative, the authors did not have reasons to explain the differences. Probably, the differences may be accounted for considering that the studies were conducted in different contexts—specifically, different geographical continents (Africa, Asia, and Europe).

A review of previous studies that have used the UTAUT model reveals that they used quantitative methods to investigate the intention and usage of an LMS (Moonsamy & Govender, 2018; Radovan & Kristl, 2017; Raman et al., 2014). On the contrary, I used a qualitative study to examine the differential use of Blackboard tools in light of the four constructs. The context within which each study was conducted may have influenced the nature of the findings. It could be argued that the context influences the extent to which different constructs impact the intention and usage of an LMS. This study used a single case study research design to examine the phenomenon. I identified whether the four constructs have an impact on faculty members’ intention and usage of Blackboard LMS tools. Having discussed the theoretical framework that guided this study, the related literature section synthesizes what has been written on faculty members’ use of LMS tools.

Related Literature

This section provides a synthesis of what has been explored in the use of LMS tools by faculty members. After a review of existing research on the topic, the themes that emerged included benefits of Blackboard LMS, challenges associated with the LMS, and the role of faculty members on the LMS platform. Each of these will be discussed in detail in the succeeding paragraphs.

Benefits of Blackboard LMS

The Blackboard LMS avails certain benefits to faculty members teaching via e-learning platforms. Among the many, Blackboard supports the teaching and learning process, ensures support for struggling students, aids in the dissemination of learning materials, and facilitates collaboration among the different users (Al Meajel & Sharadgah, 2018; Alshammari, Ali, & Rosli, 2016; Kebritchi, Lipschuetz, & Santiague, 2017; Zheng, Wang, Doll, Deng, & Williams, 2018). These four are expounded upon in the next few paragraphs.

Support teaching. Studies have shown that the information generated from the Blackboard LMS has been helpful to instructors for improvement of their teaching (Ma, Han, Yang, & Cheng, 2015; McCoy & Shih, 2016; McKee, 2017; Pereira & Wahi, 2017; Rhode, Richter, Gowen, Miller, & Wills, 2017). Specifically, a study by Moonsamy and Govender (2018) revealed that 80% of the faculty members sampled believed that the use of Blackboard would improve their teaching by freeing up time for other academic tasks. The study was conducted at a South African university. Being a quantitative study, no details were provided as to what specific ways they stood to benefit.

The Blackboard LMS can support a flipped classroom teaching design. Learning in a flipped classroom happens both inside and outside the classroom. Before the class, students are

assigned PowerPoint slides, videos, podcasts, and class readings to aid in reviewing the lesson at their own time and pace. During class time, teachers go through the lesson, apply it, and address areas of students' concerns. After the class, the teacher assigns students homework to be completed individually (El-Senousy & Alquda, 2017; Newman, Kim, Lee, Brown, & Huston, 2016).

Through Blackboard Mashup, faculty members can add content to their courses from other sources such as YouTube, Flickr, Slide-share, Adobe, among others (El-Senousy & Alquda, 2017). When faculty members merged other content sources into their teaching, studies showed that students exhibited increased motivation for learning and positive learning experiences (Cummins-Sebree & White, 2014; El-Senousy & Alquda, 2017; Newman et al., 2016). For example, El-Senousy and Alquda (2017) noted that when the Blackboard Mashup tool was used in the context of flipped classroom, there was an improvement in students' achievement scores, an improvement in the rate of class attendance, and a motivation for learning occasioned by students spending more time outside the class learning at their own pace and receiving feedback from the faculty member and colleagues.

Faculty members are provided with information regarding the course they are teaching and their teaching methods via information drawn from Blackboard analytics. The information is drawn from the frequency and behavior of different users on the platform. Using the information, faculty members can make the necessary changes to improve teaching and learning (Avella Kebritchi, Nunn, & Kanai, 2016; Howell et al., 2018; Zheng et al., 2018).

Among the tools that support teaching is the Gradebook. The Gradebook is among the most utilized tools by faculty members possibly because it has eased the process of assessment of students' assignments (Al-Naibi et al., 2015; Jorgensen et al., 2018; Walker et al., 2016).

Students can get their grades instantly upon completion of quizzes and exams provided that the faculty member selected that option. Students can view their graded assignments confidentially and at their own convenience (Bradford et al., 2007). The Gradebook has been beneficial to faculty members for several reasons. Faculty members found the Gradebook useful for managing students' assignments and posting grades so that students can access them at their convenience. Another benefit is that the Gradebook had made it easier for faculty members to prepare, disseminate, and to grade quizzes and other assignments online. Since Blackboard makes it possible for students to take their tests and quizzes online (at the students' convenience), faculty members can utilize the class time that could otherwise be used for taking tests for other learning activities (Borboa, Joseph, Spake, & Yazdanparast, 2017; Jorgensen et al., 2018; Washington, 2017). The Gradebook has also lessened the usage of paper and ink and the challenges associated with it (Walker et al., 2016). Furthermore, McKenzie (2017) noted that Blackboard intended to roll out a new feature that would track the frequency of students' participation in the discussion forum and generate a suggested grade to the professor. This action is meant to reduce the amount of time faculty members use trying to gauge the quantity of students' participation in online discussion forums. McKenzie (2017) subsequently noted that the prospect attracted mixed reactions from faculty members.

Blackboard provides support in the assessment of assignments by detecting plagiarism (Borboa et al., 2017; Hunt & Tompkins, 2014; Rhode et al., 2017). Blackboard has a built-in plagiarism detection tool known as SafeAssign. Once students submit their assignments via this link, the SafeAssign generates originality reports that show areas in the assignment that matches with other students' work (both within the institution and beyond), with published journals, and with other works on the internet. Faculty members can decide whether to use the tool or not. If

they so choose, they can allow students to access the report or not. When used as a teaching tool, faculty members can allow students to submit their assignments as a draft, which will generate an originality report that will be used by the students to revise their assignments and later submit them again for grading (Hunt & Tompkins, 2014). Studies showed that though the tool is useful to faculty members who choose to use it (Al Naibi, 2016; Washington, 2017), the usage of the tool was low in comparison to other tools (Al Naibi et al., 2015; Rhode et al., 2017). Faculty members particularly used the SafeAssign tool to support teaching by preventing and checking plagiarism. Using the tool, students were nudged to be keener in submitting original (non-plagiarized) written assignments (Washington, 2017).

Support struggling students. Blackboard LMS utilizes learning analytics to provide information to the various relevant users (faculty members included). Review of literature has shown an agreement among scholars that learning analytics is beneficial to the teaching and learning process in higher education (Avella et al., 2016; Howell et al., 2018; Knight, Brozina, & Novoselich, 2016; McKee, 2017; West, Huijser, & Heath, et al., 2016; Wong, 2017). Learning analytics has been especially helpful in early detection of at-risk students (those who stand to fail the course or drop out of the program) (McKee, 2017; West, Huijser, Heath et al., 2016). Using learning analytics in the Blackboard LMS, faculty members are provided vital demographic and academic information about every student in their classroom. Specifically, Fritz (2016) noted that faculty members are provided with information such as gender, race, or ethnicity of the student, academic preparation (as evidenced by the student's SAT scores), their current major, and the like. Students who are at risk of failing the class or dropping out of the program will be highlighted in the data using distinct colors. With the information drawn from the students' information systems and other data emanating from the students' online behavior on Blackboard

(McKee, 2017), faculty members will identify and implement personalized strategies to assist the specified struggling students. Students benefitted when faculty members intervened in a timely manner and when the help came infrequently (Avella et al., 2016; Pistilli & Heileman, 2017; West, Huijser, Heath et al., 2016). Struggling students have shown an appreciation for nudging from their instructors and especially when the personalized feedback was provided early in the course and often (McKee, 2017; Pistilli & Heileman, 2017; West, Huijser, Heath et al., 2016). In their study, Ma et al. (2015) found that students completed more of their learning tasks when faculty members guided and assisted them.

Dissemination of learning materials. A major observation among scholars is that faculty members use the Blackboard LMS to push learning information to students so that the students can access the information anywhere anytime (Al-Naibi et al., 2015; Schoonenboom, 2014; Walker et al., 2016). In cases where courses on Blackboard are structured, faculty members use the course content tools to upload the course syllabus, lecture notes, supplemental learning materials, and assessments (Kebritchi et al., 2017). Other kinds of learning materials uploaded on the LMS include video content, PowerPoint slides, and pictures (Fichten et al., 2015; Venkatesh et al., 2016). Students have the liberty of downloading the learning and supplemental learning materials to their own devices at their convenience, which in turn minimizes the use of paper (Al-Naibi et al., 2015; Walker et al., 2016). To disseminate learning materials on Blackboard, faculty members either received help from course designers to upload the materials (Borboa et al., 2017) or they learned how to do it on their own (Al-Naibi et al., 2015; Schoonenboom, 2014; Walker et al., 2016). Nonetheless, Jorgensen et al. (2018) noted that some faculty members have misused these content tools by overwhelming students with information.

Even though Blackboard LMS seeks to provide learning information to students so that they can access it anywhere anytime, the shift has not been smooth in contexts where students were used to the traditional methods of dissemination of learning content and materials. For example, the study by Al-Naibi et al. (2015) indicated that faculty underutilized Blackboard tools because students who had physical access to their instructors preferred to get learning materials from faculty members via flash drives. The study was conducted in Oman where e-learning was introduced in the year 2001 and has been steadily growing. The adoption and use of LMSs in Oman cannot be compared to the adoption and use of the same in the United States given the different levels of adoption and use of technology and specifically, of the LMSs (Al Naibi, 2016; Alshammari et al., 2016).

Support collaboration. Research shows that faculty-student interaction contributes to the students' academic success and satisfaction with the online program (Walker, 2016; Zahl, 2015). The Blackboard LMS provides a platform for faculty members to interact with their students and for students to interact with each other. This interaction happens via email, discussion boards, wikis, chats, face-to-face communication, and feedback on assignments (Bolliger & Martin, 2018; Walker, 2016). These conversations can occur at any time giving both students and faculty extended periods of interaction beyond the allotted class time. In the interactions, students can approach faculty members with perplexing questions from the course, or with questions about the assignments. Graduate students expressed more appreciation of the interaction with their faculty members especially given that Zahl (2015) showed that graduate students exhibited loneliness, stress, and confusion when they did not interact with their instructors and colleagues in the academic program. On the other hand, persistence in the academic program was cited as a positive result of interaction between faculty and students.

Studies have shown that faculty members use certain features in LMSs more than others (Al Naibi et al, 2015; Chow et al., 2018; Schoonenboom, 2014; Walker et al., 2016). Few faculty members, if any, used LMS tools such as wikis, journal and blog, collaboration, and message (Chow et al., 2018; Walker et al., 2016). This behavior continues despite institutions of higher learning making a colossal investment in securing an LMS (while the actual cost of acquiring and maintaining an LMS may vary from one location to another, HEIs must factor in the fiscal cost of annual license fees plus the cost of maintenance of the LMS together with the human and capital investment required (Wright et al., 2014)). The behavior also persists despite the earlier mentioned students' preference for interactive learning activities. Faculty members must switch their teaching methods to accommodate this new reality (Moonsamy & Govender, 2018; Park, 2015; Perez, 2018).

Announcements are among the most used tool among all other Blackboard tools (Alturki, Aldraiweesh, & Kinshuck, 2016; Walker, 2016; Washington, 2017). Faculty members prefer the announcement tool because of its ease of use and its usefulness to their teaching role (Coleman & Mtshazi, 2017). Through announcements, faculty members communicate course expectations to students, class activities for the week, and assignments due. The announcement tool is also used as a means of connection between the faculty and the students. Most faculty members use it to welcome students to the class. The announcement tool is useful because students can easily access the information when they log into the course as compared to reading the same on a physical notice board. Further, the announcement tool in Blackboard is convenient in making updates and changes to previous communications (Coleman & Mtshazi, 2017; Walker, 2016; Washington, 2017).

The Blackboard LMS provides a platform for collaborative learning. Collaborative learning allows learners to bring diverse views and experiences in addressing a given topic (Reid-Martinez & Grooms, 2018). Among the asynchronous Blackboard tools that allow for collaborative learning is the discussion board. The discussion board is a preferred tool among faculty members (Rhode et al., 2017) for fostering debates and discussion of a topic among students (Ioannou, Brown, & Artino, 2015). This is so given its ease of use (Alturki et al., 2016) and its ability to promote interactive learning whereby students are given a chance to actively engage in the construction of knowledge under the guidance of their instructors (Cerezo, Sánchez-Santillán, Paule-Ruiz, & Núñez, 2016; Rashid & Asghar, 2016; Washington, 2017). For instance, Washington (2017) noted that residential faculty members used the discussion board to gauge student learning in flipped classroom learning situations. Moreover, discussion boards allow students to engage in discussions outside of the class and fixed class time thereby freeing up time for other meaningful learning activities. Through discussion boards, faculty members can build small groups, track student participation, and judge the level at which students have grasped the information (Schoonenboom, 2014; Walker et al., 2016).

Besides the asynchronous collaborative tools such as discussion boards, Blackboard also features synchronous collaborative tools. Blackboard Collaborate is a tool available for faculty members to use in synchronous learning situations (Chandler, 2016; Politis & Politis, 2016). For example, Tonsmann (2014) used Blackboard Collaborate to teach a mathematics course synchronously to students spread across different parts of the United States. The tool is comparable to Adobe Connect and WebEx (Politis & Politis, 2016). Among the features incorporated in the tool include “audio, text chat, an interactive whiteboard, the ability to show web pages or share applications” (Chandler, 2016, p. 16). A study by Hamad (2017), which

investigated the effect of using Blackboard Collaborate in a blended learning environment, showed that students benefitted academically when the tool was used. Some of the noted benefits of using Blackboard Collaborate include the ability to interact with one another just like in traditional face-to-face settings (Chandler, 2016), and the ability to review and download recorded class sessions and materials (Hamad, 2017; Tonsmann, 2014). Connectivity and functionality hitches, some of which related to poor internet connectivity, were cited as some of the issues with using the tool (Hamad, 2017; Tonsmann, 2014).

Included in Blackboard Collaborate is the chat feature. Through the initiative of faculty members, students can interact with their peers via online chat. The chat provides space for writing notes that can be saved for future use. Through this interaction, collaborative learning takes place where students learn from each other, develop a community of scholars, and exchange learning resources, experiences, and ideas. Faculty members play a significant role in facilitating and managing these interactions. For it to be collaborative learning, students expect faculty members to guide the process and provide feedback (Bolliger & Martin, 2018; Borboa et al., 2017; Washington, 2017). Faculty members failed to use chats for lack of experience in using the same (Alturki et al., 2016; Walker, 2016). The online chat is less often used by faculty members (Alturki et al., 2016; Cunningham, 2017).

Studies have investigated the use of wikis in higher education (Ioannou et al., 2015; Nejkovic & Tosic, 2014; Zheng, Niiya, & Warschauer, 2015). These studies agree that wikis contribute to collaborative rather than cooperative learning. In other words, group members work on sections of the topic together rather than sharing the work among individual members. This resulted in positive learning experiences for the students. Zheng et al. (2015) acknowledged that wikis require digital literacy and pedagogical design for the successful utilization of the tool

in an educational context. Furthermore, students exhibited an unwillingness to edit their peers' contributions. Research is limited on the effectiveness or limitations of wikis in educational settings given that the concept is still new (Ioannou et al., 2015). Wikis provide an opportunity for students to build and organize knowledge through collaboration. Using the tool, students can edit information presented—just as is the case in Wikipedia. In the process of collaboration, students build relationships, learn from one another, and develop their communication skills (Burke & Tumbleson, 2016; Jorgensen et al., 2018). Notwithstanding, wikis have not been widely used by faculty members in higher education settings (Nejkovic & Tosic, 2014; Park, 2015).

The Blackboard LMS also features blogs. Blogs are used to support constructivist learning by allowing students the opportunity to express their views on a given topic using text, video, or audio. They are also collaborative in that once the post is made, other students can post their comments about the same (Burke & Tumbleson, 2016; Cunningham, 2017; Hodges & Grant, 2015; Washington, 2017). Usually, blogs are created and managed by faculty members for academic purposes. They are not accessible to other persons outside the class (Gomez, 2015; Hodges & Grant, 2015). Through blogs, faculty members can judge their students' level of understanding on a certain topic. Studies showed that while faculty members knew about blogs, they rarely utilized them for learning purposes (Chow et al, 2018; Gomez, 2015; Zelick, 2013); Gomez (2015) postulated that faculty members rarely used the same because they lacked professional training to connect the tool to pedagogy. Faculty members who utilized them noted that they used them to facilitate collaboration and interaction among students (Washington, 2017). In a study, Zelick (2013) reported that female faculty members used blogs for learning purposes more than their male counterparts; also, younger faculty members (aged 30-39) used

blogs more compared to older faculty members. The study did not give an explanation for the same. Nevertheless, this finding shows that there is a relationship between gender and age and the utilization of blogs for learning purposes.

E-mail is among the Blackboard tools that have been incorporated by Blackboard through outsourcing (Alturki et al., 2016; Dahlstrom et al., 2014). Faculty members mainly use e-mail to communicate with students (Al-Naibi et al., 2015; Gomez, 2015) but also to disseminate learning materials to students (Borboa et al., 2017; Burke & Tumbleson, 2016). Almost like in a face-to-face learning environment, e-mails can be used as a platform for student-faculty interaction over both course-related and non-course related matters (Cunningham, 2017). Studies have shown that e-mail is among the most utilized tools among faculty members (Al-Naibi et al., 2015; Cunningham, 2017; Gomez, 2015). The effectiveness of the tool depended on how soon the faculty members responded, and the quality of the responses (Cunningham, 2017).

Perceived Challenges Related to Blackboard LMS

The Blackboard LMS has a fair share of challenges. Some of the significant ones emanating from different studies are discussed here below. They include technical challenges, the issue of time, the fear factor, perceived resistance to change, and data management issues.

Technical challenges. Some studies indicated that faculty members perceive the Blackboard LMS as being difficult to use thereby necessitating their limited use of Blackboard tools or migration into other LMSs (Al Naibi, 2016; Al Naibi et al, 2015; Bradford et al., 2007; Moonsamy & Govender, 2018; Salajan et al., 2015). Participants in these studies noted that Blackboard is not user-friendly and is difficult to navigate. For example, Alturki et al. (2016) observed that the drop-down menu in the LMS, which was meant to ease visibility, presented challenges to both students and faculty with a disability. Some of the difficulties noted stemmed

from insufficient or lack of training and technical support; some of it came from a negative attitude that Blackboard is difficult to learn (Al Naibi, 2016; Al Naibi et al., 2015). Faculty members also reported some difficulty noted while they migrated from one LMS to another (Falcone, 2018).

Related to the difficulty are technical issues that require technical support that have been cited as challenges faculty members faced and that contributed to low utilization of Blackboard tools (Al Meajel & Sharadgah, 2018; Al-Naibi et al., 2015; Salajan et al., 2015; Walker et al., 2016). Some of the technical problems identified include "slow system response time, … formatting issues related to the discussion board tool, difficulty in managing video content, … not all features work in all browsers, and the need for 'instant chat' for help with LMS use issues" (Walker et al., 2016, p. 46). Others include a poor internet connection and technical issues related to, or emanating from, the Blackboard servers (Al-Naibi et al., 2015). Some of the technical problems may be contextual, meaning that users in one geographical context may experience issues that may be a non-issue in another. For example, studies conducted in areas with good internet connectivity will present different challenges other than poor connectivity; the opposite is also true.

The perception that Blackboard is difficult to use goes against the prevailing concept that technology should be easy to use because easiness to use determines the intention and usage of the technology (Venkatesh & Davis, 1996; Venkatesh et al., 2003). In other words, holding to the perception that Blackboard is difficult goes against the intent and purpose for which the various Blackboard LMS tools have been developed: to ease the work and the process of teaching (Eldridge, 2014).

The studies where the participants perceived Blackboard to be difficult to use were conducted in settings outside the United States where the adoption of LMSs is comparatively low (Al Naibi, 2016; Al Naibi et al, 2015; Alshammari et al., 2016). Nonetheless, a positive attitude and professional training in the use of the various Blackboard tools have been cited as ways to mitigate the difficult-to-use challenge by faculty members (Al Naibi et al, 2015; Fathema et al., 2015).

Time factor. Time investment in learning and using the Blackboard LMS has been cited as a factor influencing how faculty members use various tools (Al Naibi et al., 2015; Chow et al., 2018; Falcone, 2018; Walker et al., 2016). The use of LMS technology meant an increase in their workload (Al Meajel & Sharadgah, 2018; Moonsamy & Govender, 2018). Kebritchi et al. (2017) found that faculty members used double the time they used to prepare and teach residentially (or traditional face-to-face settings) to teach online courses. The use of LMS technology also gave students a false notion that faculty members have extra time for interaction beyond the assigned class time. Difficulty in using Blackboard meant that faculty members utilized more time in trying to figure out a solution or waiting as the information technology helpdesk tried to resolve the technical issue (Al Meajel & Sharadgah, 2018; Salajan et al., 2015). This took up time for other academic responsibilities assigned to or required of faculty. When pressed for choice, Chow et al. (2018) noted that faculty members put more effort into research work than in integrating technology in their curriculum.

Faculty members expressed a struggle transitioning to e-learning from the traditional face-to-face approach. They acknowledged that in order to use the various Blackboard tools, they needed to invest time in learning and using the various tools. Faculty members expressed willingness to put in the time to learn and use the various tools provided they got release time

and reduced workload to attend workshops and training on the same (Moonsamy & Govender, 2018; Reid, 2014).

Fear. Studies showed that faculty members who teach in residential environments expressed reservations teaching online based on fear: fear of the unknown, fear of being replaced by technology, fear of losing one-on-one interaction with their students, among others (Kebritchi et al., 2017). The fear of technology has been cited as a widespread problem facing many faculty members (Kebritchi et al., 2017; Sinclair & Aho, 2018). This fear contributes to faculty members having low self-efficacy feelings on using an LMS. Because of this fear, faculty members exhibit an avoidance behavior that is akin to resistance to change that will make them revert to what is familiar to them: the traditional methods of teaching (Chametzky, 2014; Kebritchi et al., 2017). These fears may come out as resistance to change.

Some interventions have been suggested to deal with the above-mentioned different kinds of fear. They include providing the faculty members both administrative and technical support, availing more time so that they can learn how to use and utilize the various LMS tools, and training (Falcone, 2018).

Resistance to change. This has been cited as a challenge standing in the way of utilizing various Blackboard tools. The resistance is related to how the technology was introduced to the users. Faculty members have little control over whether to use LMS technology or not. This is because the decision to adopt and use a specified LMS emanates from university administrators and is implemented top-down the university structure. For this reason, some faculty members have cited to underutilize the tools in the LMS because it was not their initiative (Moonsamy & Govender, 2018; Walker et al., 2016).

Training was recommended as an intervention to avert the perceived resistance. Training was suggested as necessary to equip faculty members with the skills and knowledge on using different LMS tools and transition from the traditional pedagogy to e-learning (Chow et al., 2018).

Reliability. The reliability of some of the Blackboard tools has been cited as a factor contributing to the limited use. Among the studies that listed the plagiarism tool among the underutilized Blackboard tools, participants in the studies questioned the reliability of the tool in detecting plagiarism (Al-Naibi et al., 2015). Faculty members questioned the reliability of the tool arguing that simply highlighting statements in students' assignments that are not original to them is not enough proof that they plagiarized. While the originality reports saved faculty members' time they would have used to manually look for unoriginal phrases and statements, the SafeAssign cannot tell accidental plagiarism from intentional plagiarism. This is so because bibliographic material is usually flagged and included in the originality reports. Faculty members must go through the report to determine this and the intentions of the student (Hunt & Tompkins, 2014; Razı, 2015). Furthermore, SafeAssign is limited in that it can only detect plagiarized words, phrases, and sentences from sources included its databases (Razı, 2015). All these factors considered made it difficult for faculty members to rely upon and effectively use the plagiarism detection tool.

Data management. Privacy issues related to the management of data have been identified as a challenge to using the LMS (Pardo & Siemens, 2014). Learning management systems collect data from student information systems (such as previous grades, economic status, and such) and from students' interaction or behavior on the platform (such as the number of times a student logs into the system and the frequency they access learning resources) (Gašević,

Dawson, Rogers, & Gasevic, 2016). This information is analyzed and passed on to different users of which faculty members are included. There are questions as to whether students are aware of when and how their personal data is used, and whether they should give consent to the use of their personal information for teaching and learning purposes. Scholars differ on how and when to obtain students' consent on the use of their personal data and whether to provide them with information about how their data is being used (Howell et al., 2018; Pardo & Siemens, 2014; West, Huijser, & Heath, 2016).

The information about each student derived from the student information systems and the LMSs is limited in that by itself it is insufficient to make an informed instructional decision. Information drawn from learning analytics cannot tell the reasons why a student may be falling behind. According to Tinto (1975), students persist to completion based on their social and academic integration into the program. Students will differ in the manner in which they are socially and academically integrated into the academic program. They may fall behind either because of personal reasons or institutional reasons. Personal reasons include readiness for college, personality issues, life issues, social-economic issues, among others while institutional issues (those that are related to the institution) may include faculty-student issues or problems with the course or the course materials (Cherif, Adams, Movahedzadeh, Martyn, & Dunning, 2014). These differences are not wholly captured in the learning analytics data. Unless the student supplies specific information about his or her personal struggles, the system cannot tell. The faculty member can only infer the reasons why a student is falling behind from the supplied information about the student (Knight et al., 2016; McKee, 2017).

The benefit of faculty members having information about the at-risk students may itself be a shortcoming. Some faculty members have wrongly used the information provided to them

via the Blackboard to profile students (Howell et al., 2018; West, Huijser, & Heath, 2016). Such faculty members have used demographic information and other past information about individual students to judge their ability to successfully undertake the currently enrolled class or complete the academic program (Lawson, Beer, Rossi, Moore, & Fleming, 2016; Scholes, 2016). This is so especially for students who are labeled as risky based on factors such as their "part-time status; gender; ethnicity; nationality; number of years of prior education, highest level of educational qualification, [their] engagement with courses, [and access to] library resources" (Scholes, 2016, p. 940) among others. Students, on the other hand, have expressed reservations with faculty members having extra details about them (Howell et al., 2018). The misgivings may be related to questions as to whether students consented to the dissemination and use of their information in this manner or for this purpose (Knight et al., 2016; McKee, 2017).

Some university administrations may have misused learning analytics data from Blackboard to surveil on the performance of their faculty members (McKee, 2017). This has generated fear among faculty members who argued that no tool can accurately measure the performance of a faculty member because there are differences in each course, the faculty, and the pedagogy (Gašević et al., 2016). Faculty members also feared that information on struggling students may put pressure and increase their workload (Howell et al., 2018; McKee, 2017, Zhong, 2016). This is because, after supplying information on students' progress, the university administration expects faculty members to intervene in a timely and personalized manner (Wong, 2017).

Effect on students. Scholars have raised concerns that the Blackboard alert system took away students' responsibility to learn independently and whether it promoted inequality in the classroom where certain students received nudges that benefitted them over the others who did

not (Howell et al., 2018; Roberts, Howell, Seaman, & Gibson, 2016). A study by Fritz (2016), however, showed that providing feedback to students nudged them to take responsibility for their own learning and not vice-versa. Furthermore, Fritz (2016) argued that faculty members have been hired for this very purpose: to work with students in different ways that may include nudging them.

Some residential faculty members used fewer of the Blackboard tools because they perceived those tools as responsible for breaking face-to-face communication with their students (Moonsamy & Govender, 2018). This view lacks merit and shows a lack of understanding because Blackboard has tools that are meant to support collaboration and interaction with students.

Role of Faculty on Blackboard LMS

The role of faculty members in a blended learning environment is different compared to a face-to-face environment. This is so because for students to have a meaningful learning experience in a virtual learning environment, there should be a substantial interaction of three factors: the cognitive presence, the social presence, and the teaching presence (Garrison, Anderson, & Archer, 2000; Radovan & Kristl, 2017). Cognitive presence refers to the student's role in the construction of knowledge whether individually or cooperatively with other students. Social presence refers to the perception of the connectedness of the various participants in the virtual platform. Teaching presence refers to the teacher's actions in preparing the course elements and facilitating learning (Garrison et al., 2000).

Cognitive presence. In a computer-mediated learning environment, students will go through four phases while constructing meaning or knowledge: "a triggering event, exploration, integration, and resolution" (Garrison et al., 2000, p. 3). Cognitive presence depends on teaching

presence; in other words, faculty members are important in preparing and facilitating students while they go through this process (Radovan & Kristl, 2017). A quantitative study by Barbaro (2018) showed that although there was no direct association between social presence and cognitive presence, students posted higher levels of cognitive presence when in a small group than when in a large group.

Social presence. Faculty members must also forge a favorable social online presence that will create an enabling climate for students to interact with one another and construct knowledge. This fact was validated by a study by Radovan and Kristl (2017) who found that teaching presence strongly influenced the social experience of students and therefore, their cognitive presence. Whiteside (2015) highlighted the importance of social presence in blended learning environments where faculty members are trying out different instructional media. This is because the social presence of faculty members in a virtual learning environment differs from the face-to-face learning environment (Kebritchi et al., 2017).

The need for faculty members to increase their social presence in virtual environments has been fueled by needs expressed by students. Students in virtual learning platforms have expressed a sense of disconnection and estrangement from their faculty members. When this disconnection is not properly addressed, students stand the risk of dropping out of the program.

Faculty members also need to increase their social presence in virtual learning environments because over 86% of students attending college nowadays can be referred to as digital natives (Perez, 2018; Prensky, 2001) going by fall 2015 enrollment statistics (McFarland, et al., 2018). Digital natives are fluent in the digital language in that they know and live in the virtual world where they interact with computers, the internet, and other devices via chats, blogs, videos, and the like. Digital natives prefer interactive learning methods such as group

discussions, simulations, field studies, among others. Furthermore, studies have shown that graduate students have a greater appreciation for faculty-student interaction than undergraduate students (Bolliger & Martin, 2018; King, 2014; Walker, 2016).

Faculty members can enhance their social presence in a computer-mediated learning environment in several ways. First, they can establish their persona as real people through sharing personal details about themselves, sharing a picture of themselves, and personalizing their feedback to students, among others. Second, they can establish their social presence by their immediacy and intimacy (personalized, friendliness, familiarity) communication to their students (Richardson & Lowenthal, 2017).

Teaching presence. Pedagogically, learning is shifting from being teacher-centered to being more student-centered (Reid-Martinez & Grooms, 2018; Schreurs & Dumbraveanu, 2014). Research shows that students respond well to interactive learning approaches that allow them the chance to construct knowledge rather than being mere receivers of information (Chametzky, 2014; Kebritchi et al., 2017; Reid-Martinez & Grooms, 2018). For this to happen, the role of faculty members in virtual environments is changing from active teaching to being facilitators of learning (Kebritchi et al., 2017; Reid-Martinez & Grooms, 2018). To enhance their teaching presence in virtual platforms, faculty members need technical competency and skills to facilitate learning and collaboration in online platforms such as the Blackboard (Chow et al., 2018).

The changing role of faculty members presents challenges and opportunities for them to bridge the gap. These changes have implications for pedagogy; faculty members must change with the changing times if they are to remain relevant and be able to meet their students' academic needs (Morrison, 2014; Schreurs & Dumbraveanu, 2014).

Motivation to Use Blackboard LMS

The perception of self-efficacy by faculty members has been cited as a factor influencing their adoption and use of Blackboard tools (Al Naibi, 2016; Zheng et al., 2018). Self-efficacy affects the attitudes of the faculty members influencing them to either use or avoid using the various Blackboard tools (Alshammari et al., 2016). In comparison, faculty members with higher self-efficacy (marked by their confidence and skills in using different LMS and computer functions) found the Blackboard tools easy to use and useful to their teaching responsibilities. This confidence propelled them to go beyond the barriers that would otherwise hold them back from utilizing the various tools (Al Naibi, 2016; Fathema et al., 2015). Studies also show that the adoption of technology requires a level of experimentation and comfort, which are necessary for faculty members to experiment and use the different tools for teaching and learning. Training faculty members in the use of different tools has been suggested as a means to build their confidence and increase their likelihood of utilizing various Blackboard tools. (Kebritchi et al., 2017; Sinclair & Aho, 2018).

Previous studies indicated that faculty members explored and used other Blackboard tools besides the content tools because they were motivated to do so by their colleagues (Jorgensen et al., 2018; Sinclair & Aho, 2018). Their colleagues motivated them in various ways. First, colleagues shared experiences on how they implemented certain tools in their course and the outcomes. Second, faculty members verbally encouraged one another on the importance of using the various tools (Falcone, 2018; Salajan et al., 2015).

Extrinsic motivations have been cited as incentives for utilizing the various LMS tools (Davis, 1989; Venkatesh et al., 2003). Faculty members have utilized the various Blackboard tools because of the usefulness of the various tools in helping them achieve certain desired

valuable outcomes. For example, some studies mentioned that the Blackboard tools were helpful to them in addressing a specific pedagogic or administrative need (Jorgensen et al., 2018; Sinclair & Aho, 2018).

Needs of Faculty on Blackboard LMS

Faculty members have certain needs that if addressed would motivate them to adopt and utilize Blackboard LMS tools more than ever. In this section, I discuss training and development, administrative support, and technical support. These have been standing out in different academic literature on LMSs.

Training and development. Faculty members have expressed the need for training in the use of LMS tools (Al-Naibi et al., 2015; Howell et al., 2018; Moonsamy & Govender, 2018). This is especially so because of the rapid changes in technology that has added new functions or tools to the LMS. Faculty members need constant training to remain abreast with the functionality of the new tools in the LMS. They also need the training to develop competencies to effectively use various tools in the university's LMS (Howell et al., 2018; Jacob, Xiong, & Ye, 2015; Rucker & Frass, 2017).

Training and development are beneficial to faculty members by increasing their confidence and inclination to using Blackboard tools (Coleman & Mtshazi, 2017). Studies showed that training increased faculty members' self-efficacy that in turn led to extensive use of LMS tools (Fathema et al., 2015; Salajan et al., 2015). The opposite was also true: lack of training led to faculty members underutilizing the various Blackboard tools, and sometimes questioning the meaning and use of some of the tools (Al-Naibi et al., 2015; Pereira & Wahi, 2017). In their study, Al-Naibi et al. (2015) faculty members indicated that lack or limited

training inhibited their intention to use various Blackboard tools. Noteworthy in that study, 89% of the sampled participants (faculty members) were over 31 years of age.

Even with the calls for more training, faculty members often did not appropriate the training into their pedagogical practices (Moonsamy & Govender, 2018). An explanation for this is that the training served more of an administrative purpose and that faculty members were not fully convinced to make the switch (Al-Naibi et al., 2015; Chow et al., 2018) or that the training did not meet their teaching needs (Pereira & Wahi, 2017). Jorgensen et al. (2018) proposed that faculty members should be consulted when designing a training workshop. Further, they can be given access to tutorials and videos that they can watch at their own pace and convenience. The reason for this discrepancy (faculty members' felt need for training and the lack of follow-through after the training is offered) necessitates this study to be conducted—to investigate whether there are other reasons behind it. This qualitative study gave faculty members a chance to tell their story in detail.

The need for training may be connected to moderating factors (gender, age, voluntariness, and experience) identified in the UTAUT model (Lai, 2017; Venkatesh et al., 2003). The need for training also falls within the facilitating conditions (also known as perceptions of external control) category of the UTAUT model. Venkatesh and Bala (2008) defined facilitating conditions as "individuals' control beliefs regarding the availability of organizational resources and support structures to facilitate the use of a system" (p. 278). In my study, I watched for the impact the identified variables had on the responses received from my participants.

Technical support. Having identified technical problems as a key barrier in utilizing the various LMS tools (Jorgensen et al., 2018), studies found a relationship between technical support and the perceived usefulness of technology (Al Meajel & Sharadgah, 2018; Tawalbeh,

2018; Perna & Ruiz, 2016; Zheng et al., 2018). For example, a lack of technical support was cited as a factor contributing to the low adoption of LMSs in Saudi Arabian universities (Alenezi, 2018). Technical support also influences the attitudes of faculty members so that they are more open to using the various Blackboard tools (Alshammari, Ali, & Rosli, 2016; Coleman & Mtshazi, 2017). The perception that faculty members can access technical support readily from the institution can encourage them to use the various tools (Al Meajel & Sharadgah, 2018). Technical support comes in the form of the assurance and the availability of technical staff to assist them with technical aspects or technical issues emanating from the institution's LMS (Coleman & Mtshazi, 2017; Mouakket & Bettayeb, 2015). It also comes in form of provision or guidance to access various software tools or manuals, and helpful resources (Alshammari et al., 2016) or guidance on using various Blackboard tools (Al-Naibi et al., 2015). The support is normally delivered through the helpdesk, over the phone, fax, or online.

Research has shown that the technical skills possessed by faculty members are self-taught through trial and error or via online resources (Jorgensen et al., 2018; Reid, 2014). Over the years, faculty members have demonstrated a growing knowledge of the use of technology in the classroom. This being the case, faculty members do not have basic technological needs as some of the university workshops tend to assume; they need solutions to more complex technical issues. Faculty members need technical support that meets their needs (Jorgensen et al., 2018; Reid, 2014) in order to obtain the benefits of the various Blackboard LMS tools. Nonetheless, technical support should not take the place of training in using the various tools (Coleman & Mtshazi, 2017). The need for technical support may be precipitated by the four moderating factors identified in the UTAUT model. The UTAUT identified gender, age, voluntariness, and experience as factors influencing users' adoption of technology (Venkatesh et al., 2003).

Administrative support. Availability or lack of administrative support may contribute to faculty members' willingness to use LMS tools (Al Meajel & Sharadgah, 2018; Reid, 2014). Oftentimes, college administrators may be oblivious to the challenges, fears, and struggles faculty members face concerning utilizing technology in the classroom (Jorgensen et al., 2018). Unless the administration understands the barriers that affect the use of different Blackboard tools, they may not satisfactorily provide helpful support.

Administrative support may come in the form of technical infrastructure in the virtual environment such as "technical help, internet infrastructure, hardware, software, training, online help" (Fathema et al., 2015, p. 214), among others that are necessary if faculty members are to function in a virtual environment effectively. It may come in the form of encouragement and other various forms of incentives to use the LMS (Reid, 2014; Perna & Ruiz, 2016; Zheng et al, 2018). Training of faculty members has been cited as a form of administrative support because the initiative emanates from the top down the institutional structure (Moonsamy & Govender, 2018; Zheng et al, 2018). Administrative support aligns with facilitating conditions, a construct in the UTAUT model (Radovan & Kristl, 2017; Venkatesh et al., 2003). This study investigated the manner of administrative support accorded to faculty members in a bid to understand whether that contributes to their differential use of Blackboard tools.

Summary

This chapter reviewed the relevant and current literature on faculty members' differential use of Blackboard tools in higher education settings. This study sought to investigate the differential use of Blackboard tools for faculty members at a large private nonprofit university in the Southeastern part of the United States. The theoretical framework section reviewed key theories that have been used in previous research. The UTAUT was chosen to guide the

direction of this research. This theory was preferred for application in this study due to its broad and inclusive nature; the UTAUT brings together eight other models that have been employed to explain the intention and usage of an LMS. The TAM, as developed by Venkatesh and Davis (1996), having been widely used in previous studies to explain the intention and usage of technology, is included in this model. The four constructs in the UTAUT (performance expectancy, effort expectancy, social influence, and facilitating conditions) have been used to shape the research questions for this study.

The related literature section provided a synthesis of what has been written on this topic. The themes that emerged from existing research included: benefits of Blackboard LMS, challenges associated with the LMS, the role of faculty members, and the needs of faculty members. Previous studies have shown that LMSs, and specifically Blackboard, are useful for teaching and learning. The key benefits of the LMS that are discussed in this section include identifying struggling students, improving teaching and learning, collaboration and interaction among users, and the dissemination of learning materials. Even with these benefits, Blackboard LMS has a fair share of challenges. Some of them are related to the system (for example, user-friendliness of the system, technical issues, and hitches), while others are related to individual faculty members (such as the time needed to use the system, their say on the use of the system, and their fear of technology). Other challenges include privacy concerns on data management and issues contributing to resistance to the change. Faculty members play a key role in actualizing the benefits of an LMS. Beyond their intrinsic motivation to use the LMS, faculty members are also motivated to use the LMS by their peers. The section on faculty role on Blackboard LMS discusses some of the key responsibilities of faculty members on an e-learning

platform. Faculty members have expressed a need for training on how to use the LMS and a need for administrative and technical support.

CHAPTER THREE: METHODS

Overview

The purpose of this single instrumental case study was to understand the differential use of Blackboard tools by residential faculty members at a large private nonprofit university in the Southeastern part of the United States. This chapter discusses the methods that were used to achieve the results. In this regard, the research design, the setting, and participants who took part in this study are stated. I have described the procedures I used together taking the role of the researcher. Consequently, I discussed my data collection and data analysis methods. Included also are measures I utilized to ensure trustworthiness and ethical considerations.

Design

This study used a qualitative method to investigate the differential use of Blackboard tools by residential faculty members. Since previous quantitative research investigated this phenomenon (Chow et al., 2018; Fathema et al., 2015; Rienties et al., 2016; Salajan et al., 2015; Schoonenboom, 2014), a qualitative method was preferred for this study for several reasons. First, the context is important in qualitative inquiry because it illumines the meanings that people assign to a phenomenon within that context. Qualitative researchers meet participants in their natural settings and use methods that avoid manipulating the natural happenings of the setting. A common method used by most qualitative researchers is the interview (Patton, 2015). Second, qualitative research methods are needed to gain an in-depth understanding of a phenomenon (Creswell & Poth, 2018). Third, researchers in qualitative research are the main instrument. As main instruments in the study, qualitative researchers actively participate in the collection of data for purposes of understanding how people in that context experience a particular situation. This

understanding is necessary for the researchers to provide a rich in-depth description of the phenomenon (Patton, 2015; Stake, 1995).

The research design chosen for this study was a case study. Case studies have been used in psychology, medicine, and law. Qualitative case study research, however, can be traced back to the 1920s. The leading case study scholars include Yin (2018), Stake (1995), and Merriam and Tisdell (2015).

I chose the case study design to understand the contextual factors that contributed to the phenomenon. Case studies investigate a phenomenon "within its real-world context" (Yin, 2018, p. 15). As the key instrument in the research, I met my participants in their natural work setting to understand the contextual factors that contributed to residential faculty members' differential use of Blackboard tools. Specifically, case studies are preferable for an in-depth understanding of a phenomenon (Creswell & Creswell, 2018; Yin, 2018). I asked open-ended questions to allow different participants to describe the factors in their context that contributed to the phenomenon.

Stake (1995) identified three kinds of case studies: intrinsic, instrumental, and collective. For this study, an instrumental case study was the most appropriate for examining the identified phenomenon. An instrumental case study design seeks to understand an issue within one bounded system (Creswell & Poth, 2018). I chose a single case so that I can focus on understanding the complexity of the issue within a specific setting (Stake, 1995). Since in a case study research, a case is a "bounded system bounded by time and place" (Patton, 2015, p. 259), I identified a large private nonprofit university in the Southeastern part of the United States as the case or the bounded system through which the phenomenon would be understood. More details on the university will be discussed subsequently in the setting section below.

Research Questions

The following were the research questions of this study. The central question for this study was:

Why do residential faculty members select certain Blackboard tools to integrate into their courses more than others?

The following were the sub-research-questions for this study:

SQ1: What personal factors motivate residential faculty members to integrate certain Blackboard tools into their courses but not others that are available to them?

SQ2: What external factors encourage residential faculty members to integrate certain Blackboard tools into their courses but not others that are available to them?

SQ3: What factors do residential faculty members believe would encourage increased utilization of Blackboard tools that are currently underutilized?

Setting

The setting for this study was a large private nonprofit university in the Southeastern part of the United States. The institution is a liberal arts institution, a private non-profit organization with over 80,000 students enrolled in over 550 academic programs both online and residentially that are accredited by the Southern Association of Colleges and Schools. The institution also has over 2,500 faculty members teaching both online and residential courses. I chose to study the phenomenon in this university for several reasons. First, going by the U.S. Department of Education (2018), the university is among the largest in the Southeastern part of the United States based on the 2018 fall semester enrollment. While most of the students are enrolled in the online programs, the institution has over 15,000 students enrolled across over 350 undergraduate, graduate, and doctoral programs and specializations in the residential program. Learning

management systems are preferred for handling a vast number of students (Bastedo & Bowman, 2017; Selingo, 2017). Second, the university uses the Blackboard LMS to deliver learning to these many students in both residential and online programs. The university has been using the Blackboard LMS for the last 15 years. Third, the institution was convenient and accessible to me the researcher. This was important because I met my participants in their natural work settings, which is the university. Qualitative researchers spend a considerable amount of time on the site to give them an opportunity to observe things that otherwise would be missed (Patton, 2015). Ease of access to the site contributed much for this to happen. Overall, the findings from this case study would be representative or instrumental to understanding other universities of similar size using similar LMSs (Stake, 1995).

Participants

Since the intent of a case study is to get an in-depth understanding of a phenomenon, researchers ought to find information-rich individuals to participate in the study (Patton, 2015; Yin, 2018). I sampled 12 individuals to participate in this study from a pool of over 2,500 faculty members and an unknown population of IT administrators/designers and faculty support coordinators. A small sample size of 12 individuals enabled me to get an in-depth understanding of the phenomenon. This is because the goal of a qualitative case study is the depth, not breadth (Creswell & Poth, 2018; Patton, 2015).

I selected the participants using purposeful sampling and snowball sampling. Purposeful sampling is a suitable sampling method for identifying information-rich individuals to participate in the study. Participants, however, had to be constituents of the selected bounded case based on their knowledge of the phenomenon (Patton, 2015; Stake, 1995). Yin (2018) mentioned that snowballing is an option for a case study researcher so long as researchers are not overly

dependent on one informant for information (to avoid reflexive influence). I asked some of the participants to suggest other knowledgeable individuals who may be interested to take part in this study, and they did. Patton (2015) mentioned that key informants may be useful in identifying participants for focus groups.

Three categories of participants were selected to take part in this study. First, I sampled residential faculty members to participate. To participate in the study, the residential faculty members had to meet the following criteria: (a) they had to be full-time or part-time faculty members who teach residentially for the university selected, (b) they had to be currently using the Blackboard LMS, (c) they had to be between the ages of 18 and 65, and (d) they had to be willing to participate in the study. Second, I sampled IT administrators and designers. The criteria for participating in this study included the following: (a) the person assumed the role of IT administrator or IT designer, (b) the person worked for the university selected, (c) the person was currently working on Blackboard or Blackboard related matters, and (d) the person had to be between the ages of 18 and 65. The third category of participants that were chosen for this study were faculty support coordinators who met the following criteria: (a) they assumed the role of faculty support coordinator in the university, (b) they currently worked with a faculty member or faculty members, (c) they were familiar with Blackboard LMS, and (d) they were between the ages of 18 and 65.

Overall, the residential faculty members provided their real-life perspectives on the phenomenon. Since all the others (IT administrators and designers and the faculty support coordinators) interacted with residential faculty members regularly, their interaction placed them in a vantage position to comment and provide valuable information and details regarding the

phenomenon. Furthermore, the latter had knowledge of the phenomenon based on their roles and experience on the Blackboard LMS.

Procedures

Before seeking the Institutional Review Board (IRB) approval, I engaged external experts to review my data collection methods. The external experts examined whether my formulated questions passed both face and content validity tests. In this case, face validity referred to the degree with which my formulated protocol questions measured what they appeared to be measuring. Content validity, on the other hand, sought to examine whether the protocol questions represented all the theoretical dimensions of the study (Kubiszyn & Borich, 2016; Warner, 2013). This step was important for dependability (Guba, 1981) and validity (Creswell & Creswell, 2018). In this regard, therefore, I selected two individuals to review my interview and focus group questions to determine whether they were valid. The individuals have earned their doctorate degrees and are currently teaching in HEIs. Persons meeting that criteria were better placed to make an objective review given their expertise and experience. I emailed them an expert review form that contained among others the instructions, the abstract and purpose of the study, research questions, and a summary of the theoretical framework. After they submitted their suggestions, I reviewed their comments and made the necessary changes to my protocol questions.

Once IRB approval was granted, I conducted a pilot study. A pilot study was necessary for the researcher to refine data collection instruments and procedures (Yin, 2018). The pilot study was conducted with a sample of faculty members and IT designers whose data was not utilized in this study. I emailed them information about the purpose of the pilot study, the activities they will be expected to do, a proposed time to meet, and terms of participation in the

pilot study. I asked them to reply to the email if they wished to participate. With those who accepted to participate, I conducted two individual interviews with residential faculty members and one focus group interview with a group of three individuals (faculty support coordinators and an IT designer). I met and conducted both the interview and focus group meeting for the pilot study at the individuals' work settings. I recorded the meetings using Otter Voice (on my phone) and a portable digital audio recorder. I used the prepared interview and focus group questions protocols as a guide. After the pilot study, I made the necessary corrections and amendments to the protocols in readiness for the main study. Those who participated in the pilot study were not contacted to participate in the main study and none of the data collected from the pilot study was included in the findings of the main study.

After the pilot study was done and changes made, I contacted potential participants sending them a recruitment letter (see Appendix B) via an email asking them to complete an online screening survey (see Appendix C). The survey aided in identifying those that met the criteria for the study. Depending on their responses, I shortlisted the names of those who were eligible to participate. I sent an acceptance letter (see Appendix D) to them via email and sought their consent and involvement in the study. I also sent an email to those who completed the survey but were not selected to participate in this study (see Appendix D) thanking them for their willingness to participate. For the eligible ones, I attached the informed consent form in the acceptance letter (see Appendix E) for their review. Using email, we agreed on an acceptable time and place to meet. Those who agreed to participate showed their commitment by signing a hardcopy of the informed consent form in my presence before the interview or the focus group meeting started. I only commenced data collection from each of them after I received their signed consent forms.

Data was gathered from the three main sources: interviews, focus groups, and document analysis. The collected data were analyzed for themes after which a final report of the findings was generated. The data collection and analysis sections will provide more details on this.

The Researcher's Role

I was the human instrument in this study. I gravitate towards the constructivist worldview and believe that people construct knowledge as they interact with their environment. As a researcher, I sought to understand the phenomenon from the people who are closest to it. I believe a qualitative research design will give the participants a chance to voice their views on this issue (Creswell & Poth, 2018; Patton, 2015).

Regarding my relationship with the participants, I have relatives who work as faculty members at two different universities. I did not use those relatives to coerce persons to participate in this study. To reduce bias, I did not ask any of the relatives to participate in the study.

I played no role in the research setting apart from having a familial relationship with some online faculty members. I recognized that this relationship may potentially influence the way I interacted with and analyzed the data gathered in this study. To counter the bias, I kept a reflexive journal (see Appendix H) where I documented my thoughts and interactions with the data.

Before joining this doctoral program, I worked as a part-time adjunct professor in a traditional setting. Even though I have no experience teaching online or using Blackboard LMS for teaching (to date, the only experience I have had with Blackboard LMS is as a student), I look forward to working as a faculty member in the future in an HEI setting. I noted that this aspiration in some ways played to potentially influence the way I interacted with the participants

and data collected for this study. To reduce the bias, I ensured that I kept my relationship with the participants professional and I duly informed them that the purpose of my study was purely academic.

Data Collection

Case studies seek an in-depth understanding of the phenomenon. For this to happen, multiple sources of data collection are utilized (Yin, 2018). In this study, three main forms of data collection were utilized. The three methods included (a) interviews, (b) focus groups, and (c) document analysis. The details of how they were utilized in this study are discussed in the order they are listed.

Interviews

Since case studies seek to provide a deeper understanding of an issue, interviewing is the most commonly used method of data collection. Interviews provide participants an opportunity to provide vivid descriptions of how they experience or make sense of the phenomenon. For this to happen, researchers ask participants guided open-ended questions followed by relevant probing questions that seek answers to the how and why questions. As it were, the researcher lets participants do much of the talking so that they can sufficiently articulate their interpretations and opinions on the phenomenon (Patton, 2015; Stake, 1995; Yin, 2018).

In this study, I interviewed selected residential faculty members at times convenient to them. I scheduled the interviews to take place in the participants' offices or work settings. This was necessary to give me a chance to observe their natural work settings. Interviews ran between 40 minutes and one hour. I used an interview protocol as a guide. At the onset of the interview, I provided the participants with a hardcopy of the informed consent for signing. After that, I presented them with a brief survey that asked them to fill in some demographic data about

them. The survey had a chart that listed the different kinds of Blackboard tools. With the chart, I asked them to comment on how frequently they have utilized each of the tools indicated in their residential-class setting. I allowed them the liberty to refer to the chart during the interview process. After obtaining permission from the participants to record, I recorded all interviews using two audio recording devices. The two audio-recording devices were necessary to ensure that I did not lose data either due to malfunction or poor recording of one of the devices. The primary audio-recording device was the Otter Voice, a phone application that recorded, transcribed, and stored the conversation online in a repository only accessible using my credentials (Solsman, 2018). I also used a portable audio recording device as a secondary gadget. I made short notes as the interview progressed (Stake, 1995) to keep track of the main thoughts in the discussion. I ensured eye contact and active listening so the participant took priority over notetaking. In some instances, I barely did take notes. Participants were at liberty to withdraw from the interview at any point without the risk of any consequences (Patton, 2015).

The following were the list of the questions that formed the interview protocol for faculty members:

Standardized Open-Ended Interview Questions

1. How long have you been teaching overall?
2. What discipline or academic program do you teach?
3. What classes do you teach?
4. How long have you been utilizing Blackboard as a teaching tool in your classes?
5. Which of the following Blackboard tools have you utilized in your residential class and how frequently?

Tools	Frequently used	Less utilized	Never used	Not aware it exists in Blackboard
Announcements				
Blackboard Collaborate				
Blogs				
Chat				
Course content				
Discussion board				
Grade Center				
Journals				
SafeAssign				
Wikis				
Other				

6. How has the use of Blackboard impacted your job performance and the quality of your work?
7. How would you describe your experience using Blackboard LMS?
8. Which Blackboard tools have you found most useful in your teaching and why?
9. Which Blackboard tools have you found to be least useful in your teaching and why?
10. How have your colleagues influenced you in using different Blackboard tools?
11. What do your colleagues mention as their motivations for using the various Blackboard tools?
12. In what ways has your supervisors or the administration influenced you in using different Blackboard tools?
13. How has the technical support team encouraged or discouraged you to integrate the various Blackboard tools in your classroom?
14. What nature of Blackboard-related-concerns have you raised with the support team and why?
15. In what areas have you been trained with regard to Blackboard use?

16. How have you utilized the training you received towards the use of Blackboard?
17. What role has the university administration and leadership played towards the ongoing Blackboard and other technological training?

Questions one through five were knowledge questions intended to elicit facts about the individual participant (Patton, 2015). The questions gave the participants an opportunity to give details about themselves. Since these were straightforward questions, they helped in orienting the participants into the content of the interview. These questions also addressed three of the moderating variables (gender, age, and experience) in the UTAUT model (Lai, 2017; Venkatesh et al., 2003). Voluntariness, a fourth moderating variable in the model, was deduced based on how the participants answered the rest of the other questions.

Questions six through nine were aimed at giving the faculty members an opportunity to discuss the personal reasons or motivations behind their use of various Blackboard tools. Specifically, the questions explored how the performance expectancy and effort expectancy constructs (identified in the UTAUT model) influenced residential faculty members' differential use of Blackboard tools. Performance expectancy is based on the premise that technology should aid the user in working more efficiently. The performance expectancy factor has been regarded as the most influential indicator of behavioral intention to use a piece of technology (Moonsamy & Govender, 2018; Radovan & Kristl, 2017; Raman et al., 2014). The questions are opinion and values kind of questions (Patton, 2015). Effort expectancy in the UTAUT model refers to the easiness of using the technology. Previous research has shown that Blackboard is not easy to use (Al Naibi et al., 2015; Lai, 2017; Moonsamy & Govender, 2018)—as such, contributing to residential faculty members' differential use of the various tools. These questions

are a mix of knowledge questions and opinion and values kind of questions (Patton, 2015); the participants will state a fact and give reasons behind their answer.

Research has shown that users of technology have developed an intention to use it based on the influence of other people significant to them. This aspect was identified as social influence in the UTAUT model (Lai, 2017; Radovan & Kristl, 2017). Questions ten through twelve sought participants' perceptions regarding this construct. Faculty members commented on how their colleagues and supervisors had influenced them or not towards using various Blackboard tools.

Questions thirteen to seventeen were meant to investigate the nature of support faculty members received from the university. In other words, these questions examined how facilitating conditions in the UTAUT model may have to do with residential faculty members' differential use of Blackboard tools. Facilitating conditions refer to the users' belief that they have the organization's support and other necessary technical infrastructure to support their use of the technology (Raman et al., 2014; Venkatesh et al., 2003).

Focus Groups

Focus groups were utilized in this study. Focus groups are used to interview groups of people in similar backgrounds or cultural setting. The goal of focus groups is to hear different views on an issue or a consensus on the same. Usually, a group of 5-10 people participates in the focus group session that lasts for about an hour or so with the researcher as the moderator. Some of the advantages of focus groups include cost-effectiveness, enhanced discussion among participants, and free-flow of the interview process. Some of the identified disadvantages include: few questions may sufficiently be tackled within the available time, some minority

views may go unheard; participants may shy away from controversial topics (Patton, 2015; Yin, 2018).

In this study, I set up a focus group meeting for both IT designers and faculty support coordinators. The meeting happened during their lunch break at a reserved conference room at the university. I provided them lunch. After seeking permission from the participants, I recorded the focus group session both in audio and video. I video recorded using a video camera. The video recording was necessary to identify who said what during the focus group meeting. In my audio recording, I used two audio-recording devices to curb the possible loss of data in the event of a device malfunction or poor recording. My phone, which holds the Otter Voice application was the primary audio-recording device. The Otter Voice was selected because it automatically recorded, transcribed, and stored the data in an online repository as the participants spoke. I can only access the data by logging into the account using credentials only known to me (Solsman, 2018).

The following were the list of the questions that were in the interview protocol used for the focus group meeting:

Standardized Open-Ended Focus Group Questions

1. Please introduce yourselves by stating your name, your job title, and your department, and a brief description of your position.
2. How do you identify yourself in terms of gender and age?
3. How long have you been working in your position?
4. What experience, if any, have you in the Blackboard LMS?
5. How does the Blackboard enhance the teaching roles of faculty members?

6. What personal struggles have faculty members expressed regarding integrating various Blackboard tools in their classes?
7. What supports are available for residential faculty members towards using the various Blackboard tools?
8. What is the university policy regarding residential faculty members' use of various Blackboard tools?
9. What is the content of the training that residential faculty members receive towards the use of Blackboard tools?
10. How have residential faculty members responded to training in using various Blackboard tools?
11. What additional support do faculty members require to encourage their increased utilization of Blackboard tools?

The same rationales given for categorizing the questions according to the moderating variables and the four constructs identified in the UTAUT model as discussed in the interview section above informed the structure of the focus group questions. As such, questions one through four were knowledge questions intended to get demographic information about the participants (Patton, 2015). Questions five and six were designed to align with effort expectancy and performance expectancy constructs. Since I was looking for factual information, most of the questions for the focus group dealt with the facilitating conditions. Questions seven through eleven were fashioned around the social influence and facilitating conditions constructs.

Document Analysis

Document analysis is one data collection method "likely to be relevant to every case study topic" (Yin, 2018, p. 113). Analysis of both electronic and paper documents will provide

vital information leading to a deeper understanding of the phenomenon. Patton (2015) mentioned that institutions have various kinds of paper trail and records that can shed light on the phenomenon. Documents are also necessary for the corroboration of information (Yin, 2018).

In this study, I found documents (archival data) that shed light on how residential faculty members used different Blackboard tools to facilitate teaching and learning. I made a formal request to the institution for analytics data that tracked how certain residential faculty members navigated (the tools accessed and the frequency of clicks made) on the university LMS. This information was necessary to tell whether the residential faculty members exhibited the characteristics necessitating this study (i.e., using certain Blackboard tools over others available to them).

While documents can be used to make inferences about the organization, the inferences should be used as a means to an end and not an end in itself. Moreover, they should be corroborated with other sources to ascertain whether they are valid or not (Yin, 2018). With the information gained from the interviews and focus group meeting, and with the recommendation of some of the participants, I looked and found in the university website more information relevant for this study. This information was taken as official data from the institution. It strengthened the collected interview and focus group data by illuminating the training workshops conducted and scheduled, the role of the university regarding residential faculty members' use of tools in Blackboard LMS, among others. With that information, I made inferences about the faculty members' use of the tools.

Yin (2018) warned that documents should be thoroughly scrutinized to ascertain their credibility and accuracy. This is because organizations may skew information in their official documents to achieve their goals. In this study, I corroborated the data from different documents

with other information derived from other sources to ensure they were credible and accurate. I used information from the website to probe the residential faculty members and the IT administrators further on areas that needed clarification or elaboration.

Data Analysis

Data analysis in qualitative research follows three steps. First, the collected data is transcribed and stored. Second, the data is coded for themes. Third, the data is represented in a report with charts and figures (Creswell & Poth, 2018). Data analysis will go hand in hand with data collection until a saturation point is reached. Meanwhile, the researcher keeps memos of emerging ideas and questions for further questioning. The memos are stored securely either online or in a safely locked storage area (Patton, 2015; Stake, 1995).

In this study, data analysis went hand in hand with data collection. The first part of data analysis involved transcription of the collected interview and focus group data during data collection; this was made possible using the Otter Voice phone application. I went in manually through the transcribed data to ensure it was an accurate word for word representation of what the participants said. I conducted member checking by emailing back the transcriptions to the participants to confirm that they were an accurate representation of what they said. They were allowed the liberty to revise and add information to the transcriptions. This is necessary to enhance the credibility of the research (Birt, Scott, Cavers, Campbell, & Walter, 2016; Lincoln & Guba, 1985). I stored the transcribed data (with member-checking notations) in a password-protected computer.

The second stage of data analysis is the coding of the collected data. While the software is helpful in the data analysis process, Saldaña (2016) recommended that researchers should manually code the transcribed data before using the computer software so as to familiarize

themselves with the data and have more control while coding. I, therefore, read through all the transcribed data to identify key ideas emanating from the same. While at it, I identified areas of convergence and divergence (Patton, 2015) and subsequently made side notes to that effect. Using a table (see Appendix J), I recorded the open codes in one column. In a second column, I clustered similar codes together. I further refined the codes to the point where I developed themes that were reported in Chapter Four.

In addition to manual coding, I used a computer-assisted-qualitative-assisted-software (CAQDAS), NVivo, to analyze my data. Since case studies involve working with lots of data, NVivo was essential to help me organize, manage, and store the data together with the nodes and codes I had developed (Saldaña, 2016; Yin, 2018). The software was preferred because it integrated all the collected data (transcribed interview and focus group data, information from the university website, and data from the university Blackboard). I used the software to store all the data collected for easy accessibility when needed. The information was safe because NVivo required the use of a password to access the account. I also used NVivo to identify more codes and themes and analyze the data with more accuracy. I did this by uploading all the transcripts, memos, and data from the websites into the software. The N-Capture feature in NVivo transformed websites into PDF files, which made it possible for me to upload it into my NVivo project for analysis purposes. With all the data uploaded, I analyzed it using the software to identify any codes I may have missed. Patton (2015) noted that CAQDAS has simplified the process of locating important phrases, quotes, and codes or themes in the analysis process.

Yin (2018) discussed four general strategies for analyzing case study data. They include the following: (a) relying on theoretical propositions, (b) working your data from the 'ground-up', (c) developing a case description, and (d) examining plausible rival explanations. In this

study, I relied on theoretical propositions that shaped my research questions to organize my data for analysis. I used the four constructs in the UTAUT model (namely, performance expectancy, effort expectancy, social influence, and facilitating conditions) to organize and analyze my data. Moreover, I remained open to identifying and responding to plausible rival explanations of my stated phenomenon—to strengthen my findings. Yin (2018) discussed several analytic techniques case study researchers may use to analyze data. The analytic techniques are "(1) pattern matching, (2) explanation building, (3) time series analysis, (4) logic models, and (5) cross-case synthesis" (p. 175). I used the explanation-building technique to analyze my data. Explanation building seeks to provide answers to the how and why questions of the case study. The goal of this technique "is not to conclude a study but to develop ideas for further study" (Yin, 2018, p. 179). Through this technique, my study created an awareness of the issues facing residential faculty members necessitating their differential use of Blackboard tools; this formed the basis for making recommendations and practical suggestions.

Archival data was requested from the Analytics and Data Support (ADS) office. The data that I received contained about 10,000 entries. Using Microsoft Excel, I first cleaned the data by replacing identifiable information with codes and names only known to me, the researcher. I then analyzed the data with the goal of developing a table. After developing a table, I made a report of the findings.

Research has shown the importance of having an external auditor review the collected data for consistency (Patton, 2015; Yin, 2018). Once I completed the data analysis process and had written a rough draft of findings from the study, I engaged an external auditor to check for consistency of the data collected and the themes identified. The auditor was a colleague, a

fellow doctoral student who had completed qualitative courses. I refined my report using the comments they made.

The third stage of data analysis involves representing the findings in a report. Having identified the themes, I began writing the report. Since NVivo had all the data together in one place, I used the software to identify exact quotes for support in the writing of the report. I also used the software for the storage of the data collected. The report was organized according to how the data answered the research questions of this study. This study will have a discussion section that will discuss the identified themes (Creswell & Poth, 2018; Patton, 2015).

Trustworthiness

This section will detail ways in which the researcher ensured the trustworthiness of the findings from this study. Lincoln and Guba (1985) discussed four ways of ensuring the trustworthiness of a qualitative study. This section discussed steps to increase credibility, dependability, confirmability, and transferability of the findings in this study as discussed in light of Lincoln and Guba (1985).

Credibility

Credibility has to do with whether the conclusions of the study can be believed (Lincoln & Guba, 1985). To enhance credibility in this study, I met my participants in their natural settings and spent time on the study site. In the course of the study, I built relationships in the university and asked questions to gain a deeper understanding of the phenomenon. I also triangulated data sources. Triangulation of data sources means "comparing and cross-checking the consistency of information derived at different times and by different means from interviews, observations, and documents" (Patton, 2015, p. 662). I compared data gathered from interviews and focus groups with documentary evidence and previous research work before I reached a conclusion and reported. I talked to different people in the institution (residential faculty

members, faculty support coordinators, and IT administrators/designers) and used different methods of inquiry (interviews, a focus group, and archival data) to capture different or multiple perspectives on the phenomenon. Also, I provided a thick description of participants' views by use of direct quotes of their actual statements. Member-checking is another means of ensuring credibility. In this regard, I emailed the interview transcripts to the participants asking them to verify and add information to what they shared in the interview and focus groups (Guba, 1981; Lincoln & Guba, 1985).

Dependability and Confirmability

Dependability and confirmability have to do with the consistency of the process and product of the research study (Lincoln & Guba, 1985). A study is dependable if the researcher can adduce evidence to show that "the process was logical, traceable, and documented" (Patton, 2015, p. 685). This aligns with what Yin (2018) described as reliability—that other researchers would arrive at the same results if they used the same procedures. Confirmability, on the other hand, seeks to establish that the findings are not merely a researchers' anecdotal notations but actual articulations of the participants (Hays & Singh, 2012).

To ensure dependability in this study, I provided sufficient details on the procedures used. I maintained an audit trail of my data collection and analysis procedures (see Appendix I). I also used an auditor to check the procedures I used for consistency (Guba, 1981). To enhance confirmability in this study, I used an external auditor. I chose an external auditor, someone who is an expert in the field, to crosscheck my findings to ensure my inferences are accurate and well supported by the existing or previous literature. I emailed the participants my findings for them to comment on their accuracy and coherent representation of the facts (Birt et al., 2016).

Besides, I used direct quotes from participants to provide a thick description of their views (Creswell & Creswell, 2018).

Transferability

Transferability has to do with the generalization of the findings of the study. It is not possible to generalize qualitative case study findings. However, the researcher can provide sufficient information regarding the case studied so that the findings of the study can be applied to individuals in similar settings or comparable settings (Lincoln & Guba, 1985; Patton, 2015). For transferability to occur, Yin (2018) underlined the importance of basing a case study on a theory, which will aid in generalizing the findings of the study. In so doing, the researcher will demonstrate in their findings section how their findings enlighten, extend, or relate to the theoretical framework they identified.

In this study, I ensured transferability by providing a detailed or thick description of the case and the data collected. For this reason, it would be possible to generalize the findings of this study to other institutions of higher learning where the Blackboard LMS is used for teaching and learning. Transferability was also enhanced by ensuring the how and why questions posed in the study were addressed during the data collection and data analysis processes (Guba, 1981; Yin, 2018).

Ethical Considerations

Qualitative research studies should be conducted ethically. In this study, I observed the following ethical standards. Before collecting data, I sought the approval of the IRB. Before taking part in this study, participants were asked to complete an informed consent form, which informed them of the nature and purpose of this study. This also informed the participants of the potential risks of taking part in this study before they committed to participating. I explained the

purpose of the study to the participants in several ways: during the initial recruitment to participate in the study, in the informed consent form, and before the start of the interview process.

During the data collection stage, I ensured that I did not push participants to share sensitive information or such that they were uncomfortable to share. I ensured that the interviews were conducted in a comfortable environment convenient to the participants. Participants were assured that they could opt-out of the study at any time for any reason without the possibility of suffering any consequences whatsoever (Patton, 2015). To avoid the bias of wanting to substantiate preconceived ideas about the phenomenon, I made personal notes (memos) after every encounter with participants and recorded any new ideas that proceeded out of the interview sessions, which I corroborated it with existing evidence.

All in all, I ensured the privacy and confidentiality of the participants and the site by using pseudonyms to mask their real names. I also deleted from the data and the final report any identifying information. Confidentiality was maintained by the use of pseudonyms to conceal the identity of the individuals and the site. Where applicable, the researcher removed any identifying information from the data (Patton, 2015; Yin, 2018).

Data was securely stored in a password-protected computer and on an online cloud. In accordance to federal regulations, the data will be kept for three years following the date of the completion of this research project following. On the expiry of the period, all data will be erased from the computer and online cloud using computer software recommended by the IRB or the university's school of education.

Summary

This chapter identified the research design for this study as a single instrumental case study. The instrumental case study design was chosen to understand the contextual factors that contribute to the differential use of Blackboard tools for residential faculty members at a large private nonprofit university in the Southeastern part of the United States. Participants were drawn from residential faculty members, information technology administrators and designers, and faculty support coordinators at a selected university. Data was collected using interviews, focus groups, and document analysis. Collected data was transcribed using Otter Voice and analyzed both manually and using NVivo computer software. A report of findings was generated. Measures to ensure trustworthiness (credibility, confirmability, dependability, and transferability) were enumerated.

CHAPTER FOUR: FINDINGS

Overview

The purpose of this single instrumental case study was to understand the differential use of Blackboard tools for residential faculty members at a large private nonprofit university in the Southeastern part of the United States. After interviewing residential faculty members and engaging faculty support coordinators and IT administrators/designers in a focus group, alongside analyzing archival data drawn from the institution, key themes that emerged from the data were identified. This chapter provides a glimpse into the participants of this study. It also reports the findings of the study represented in themes as they answer the research questions posed at the beginning of the study.

Participants

Participants for this study included residential faculty members, faculty support coordinators, and IT administrators and designers. A total of 12 participants contributed to this study from a pool of 33 individuals who were contacted. Of the 12 individuals who took part in this study, 5 of them were residential faculty members, 5 were IT administrators and designers, and 2 were faculty support coordinators.

Residential Faculty Members

I interviewed a total of 5 residential faculty members. Of the 5 faculty members who participated, 3 of them were male and 2 were female. Three of them were assistant professors while 2 had earned the rank of associate professor and professor respectively. Three of the residential faculty members interviewed were over 50 years old while 2 were aged below 50 years. I have provided a brief description of each of the 5 residential faculty members. I used pseudonyms to protect their identities. A summary of their profiles is represented in Table 1.

Table 1

Profile of Residential Faculty Members who Participated in the Study

Participants	Gender	Rank	Age group	Teaching Experience (years)
Paula	Female	Assistant Professor	51-65	10
Nicole	Female	Associate Professor	36-50	13
Alfred	Male	Assistant Professor	36-50	2.5
Michael	Male	Professor	51-65	18
Philip	Male	Assistant Professor	51-65	35

Paula. Paula has been teaching at the university for the last 10 years. During that period, she has used Blackboard for teaching. She mentioned that she teaches both residentially and online for this university. Before teaching, Paula worked as an office manager at the university and as a substitute teacher for a local school district. Paula earned her education via the university where she now teaches. Besides teaching her assigned courses, she instructs her students on the importance of maintaining an updated presence online.

Nicole. Though aged below 50 years, Nicole has been teaching for over 13 years. She has used the Blackboard LMS for teaching for over 10 years. She is a contributing author and a blogger for an American association. Nicole mentioned that she received the blogging training from a boot-camp she attended at the university. Beyond blogging for the association, she has used blogs in her class. She is desirous of growing and learning new skills that would enable her to become better at what she does. This was better demonstrated during the interview when she scrolled down the university training webpage and was amazed at how much she was bypassing

opportunities to grow in her profession and career. At the end of the interview, she noted that she will go and pursue the training workshops offered at the university.

Alfred. Alfred is an assistant professor at the university. He has been teaching at the university for the last two and a half years. Before that, he worked as a graduate teaching assistant to some residential faculty members while he pursued his studies at this university. Though he has used Blackboard in his education, he has two years' experience using Blackboard for teaching. Alfred was born and raised outside the United States and unmarried at the time of the interview. Alfred showed interest to grow in his teaching career. He mentioned that he plans to pursue a terminal degree in the future.

Michael. Michael has been teaching for the last 18 years. Of those years, he has used Blackboard for over 15 years for teaching. Michael has published widely and contributed to several academic journals. He has served in the rank of a professor for the last six years. He also serves as a chair and a program director in his department. Besides teaching, he also runs a private practice. Before joining this university, he worked for a private company for over 10 years. Michael came out as humorous, especially in some of the ways he explained certain concepts during the interview.

Philip. Philip identifies as an adjunct professor with a teaching experience of 35 years. Of those years, he has used Blackboard as a teaching tool for about 5 years. Though he teaches, he is also in the process of completing another degree in the university. He has worked for other residential faculty members as a graduate teaching assistant. He was born outside the United States. Philip appeared experienced in the use of the Top Hat software as judged by the number of times he mentioned it and the detail with which he described different aspects of it.

Faculty Support Coordinators

For this study, 2 faculty support coordinators participated in the study out of 11 of them contacted. The faculty support coordinators participated in a focus group meeting together with information technology administrators and designers. A brief description of the two is provided below. The real identities of the participants are masked using pseudonyms. A summary of their profiles is represented in Table 2 below.

Kara. Kara works as a practicum/internship coordinator, an equivalent of a faculty support coordinator. Her role involves supervising a certain number of gate coordinators. She works with residential and online faculty members teaching certain courses. Among her roles, Kara works with faculty members to develop and manage course shells on Blackboard. Kara graduated from the university with an undergraduate degree two years before her participation in this study.

Olivia. Olivia works as a faculty support coordinator. She has worked with faculty members on Blackboard for two and a half years. Her role involves building Blackboard courses, fixing any issues within Blackboard during the semester, helping train faculty regarding practicum/internship requirements, placing students within their practicum/internship sections, and answering questions for both residential and online faculty members.

Information Technology Administrators and Designers

Participants were also drawn from among IT administrators and designers in the university. Out of the 8 individuals contacted, 5 of them responded positively and participated in this study. The profiles of these individuals are briefly discussed below. Their identities have been masked by the use of pseudonyms. A summary of their profiles is represented in Table 2 below.

Table 2

Profiles of Faculty Support Coordinators and IT Administrators/Designers who Participated in the Study

Participants	Gender	Role in University	Experience (years)
Kara	Female	Faculty Support Coordinator	2
Olivia	Female	Faculty Support Coordinator	1.5
Harold	Male	Project Manager	2
Audrey	Female	Course Editing Supervisor	6
Valerie	Female	Instructional Technologist	19
Patrick	Male	Lead Technologist	3
Aaron	Male	Senior Educational Technologist	6

Harold. Harold came out as a man of calm demeanor. He has worked for the university for two years. He mentioned that he has been working with the editing team and instructional design teams for the last year as a project manager. Before that, he had worked in several similar positions in the university. He previously worked as an instructional technologist for six months, instructional designer for a year, and a course editor for five months. Harold plans to complete a Master of Business Administration in the future.

Audrey. Audrey has worked in the university for six years. During that period, she worked as an instructional designer for five years. At the time of the interview, she worked as a supervisor in the course editing team at the university. She has worked with faculty members under various titles developing and innovating the curriculum. Her dedication to her role contributed to her being listed among the top employees of a certain month in 2017. Her interest

in course development and management was evidenced by her being a member of e-learning and online education associations.

Valerie. Valerie has been working for this university for over 19 years. She began her role in the university as a course editor and worked in that position for six years. She then moved on to work as an academic technologist and a project manager for a year. At the time of the interview, Valerie worked for the university as an instructional technologist in the analytics and data support department. Valerie has a wide experience working with faculty and on Blackboard. She specifically mentioned that she has experience working with faculty on Blackboard for over 15 years. Her colleagues fondly refer to her as the Blackboard guru. During the interview, she referred to herself as the Blackboard evangelist. Her passion for the use of technology and Blackboard to deliver learning to students was unmistakable during the focus group meeting.

Patrick. Patrick has worked for three years at the university. At the time of the interview, Patrick was a lead technologist in his department, a position he has occupied for the last two and a half years. Previously, he worked in the university as an educational technologist for over a year. Before working for the university, Patrick worked as an academic technologist for two high schools for about 15 years. For this reason, Patrick wields experience and skills in instructional technology among others.

Aaron. Aaron has served both as a senior educational technologist and an adjunct instructor at the university. He has served as an adjunct instructor for the last four years. Aaron worked as an educational technologist for over six years across two departments in the university. His work entails providing support to residential faculty members towards course design and development, integration of technology with instruction, and specifically in working

with Blackboard among other educational technologies. At the time of the interview, Aaron was completing his terminal degree.

Results

The purpose of this single instrumental case study was to understand the differential use of Blackboard tools for residential faculty members at a large private nonprofit university in the Southeastern part of the United States. Data was collected using semi-structured interviews, focus group, and archival data. A total of five residential faculty members were interviewed. The focus group brought together seven IT administrators and designers and faculty support coordinators. Archival data was drawn from the university website and from the institution. All quotes from participants cited in this study are presented verbatim and include verbal ticks and grammatical errors in speech and writing to more accurately depict participants' voices.

Theme Development

Once data was collected, transcriptions were prepared for analysis. As the interviews and the focus group meeting happened, the Otter Voice phone application both recorded the conversations and automatically generated transcriptions, which saved me many hours of manual transcription of the data. With each transcription, I listened to the audio-recording while reading the transcription to ensure that it accurately transcribed what was actually said. After cleaning the transcriptions, I conducted member-checking with the participants. Most of those who replied did not offer any suggestions or corrections. One of them refined his statements and another one suggested university websites where I could get additional information regarding this study.

Several themes emerged as I analyzed the data collected. I went through all the transcriptions and I identified codes emanating from the statements. I recorded the initial codes

in a table (see Appendix J). After analysis, I ended up with over 20 codes that I later used to develop themes. And after further analysis, I settled for seven themes, namely, time, motivation, Blackboard, training and support, social support, requirements, and fear. Each of these themes will be explained further below.

Time. Residential faculty members interviewed noted that they sparingly utilized the tools because they were busy with other responsibilities related to their role. This was fleshed out by Michael who mentioned that "my schedule is usually pretty tight." Among the things that filled his schedule included "writing, mentoring students, advising students, preparing for class, teaching in class." Nicole articulated the same when she mentioned that "since I have been here, my responsibilities have increased more, and more." On a related note, Paula said that she does not explore or use other tools because of the time factor. Time was an issue for her because "there [was] so much in the content for our classes." And since Paula did not have a Graduate Student Assistant (GSA), the use of other tools "would just take more time and attention away from the content."

With residential faculty members expressing time as a constraint, Paula shared that using other tools would mean for them "one more thing to learn, and it is one more thing to add, and again taking away from my time." This was confirmed by Nicole who went out of her way to incorporate blogs into her classroom. Looking back, she reckoned that "it was also a lot of work to manage. So kinda was creating a lot of extra work for myself at the same time." When asked about her colleagues, she later said, "I'm not sure, you know, how much people want to take time to use features that may require a lot of additional work, and extra time."

For residential faculty members to use other tools than what they normally use, training on how to use the tools may be necessary. For training to happen, residential faculty members

need to yield their time. With residential faculty members already feeling pressed for time, yielding time for training proved difficult. Valerie articulated this well when she said, "I do some faculty training at times, and trying to get faculty that you know should be there to carve out time to come is difficult." Residential faculty members showed up for training workshops that were required by the administration. For instance, Paula mentioned, "I have taken several Blackboard courses, the ones that are primarily the required ones." Alfred noted that "it would be like a requirement for us as faculty to attend that training. And that, that is what I do." Regarding the training, Philip said, "The early trainings, yes, like I went through when I got hired but ongoing trainings, no; it is not required." This explained the conclusion by Valerie that "they don't have the time to learn something new, or the desire to learn something new unless they have to."

Lack of time to learn and to use other tools resulted in certain behaviors. One such behavior was that some residential faculty members signed up for training workshops and then failed to show up on the training day. In this regard, Patrick narrated his experience while he was working at his department. Residential faculty members would

> sign up through our professional or whatever, the ProDev portal, and then you go in there at 3:30 and nobody is there. And that is not because they are being slack or not reading it right but because they are just overwhelmed.

A related behavior was that they signed up for the training and showed up only to sign the attendance list and leave. Regarding this, Audrey noted that some residential faculty members showed up in the residential concourse training workshop and they "literally wanted to get that sign-up sheet and walk out."

Another behavior associated with the lack of time to learn and use other tools was the tendency to have others do it for them. For example, Olivia, a faculty support coordinator observed that some residential faculty members came to them saying, "'I don't know how to do this.'" In her opinion, "it's really simple! But they just don't take the time to like really learn how to do it." It, therefore, seemed that some faculty members are simply unwilling to commit the time to learn how to use different tools. Philip narrated his experience of learning technology by asking for help from resourceful others and said, "Sometimes I have not learned. I have had my fellow do it for me. 'Hit here.' Sometimes they will move too fast. 'Hit here, hit here. Okay, you are good. You can go now.' So, I am not alone."

Motivation. The data revealed that residential faculty members were motivated by both personal or intrinsic motivations and extrinsic motivations to utilize various Blackboard tools in their classrooms. In this study, intrinsic motivations included both those factors that benefitted the residential faculty members personally and those that benefitted the students as well. Extrinsic motivations identified in this study referred to the encouragement that residential faculty members received from others or other sources. Each of these will be discussed in more detail below.

Intrinsic motivation. Some residential faculty members indicated that they were motivated to attend training workshops to remain on the cutting edge. Alfred mentioned his motivation for attending the different training workshops as being "I usually attend both of them because I want to see, you know, what is new and maybe, anything that I am missing. And also to specialize when it comes to using different tools." On the same plane, Philip underlined the importance of training when he stated,

> So, I think that the training assumes progress. Things are changing, updating. Some old, some tools go out of date, some new tools come in. The demography is changing. Like for example, if you are having bigger and bigger classes, you can do things like as if you had a small class. You know you got to communicate differently. The changes dictate that training is required because the school is changing all the time.

Extrinsic motivation. The reason residential faculty members' use of various tools is for the benefit of their students. This motivation was apparent in various statements by the interviewed participants. Nicole showed a motivation for learning and using other tools pegged on enhancing students' learning experiences: "The main thing for me is I want to make learning more fun. So, I have tried to figure out how can I make learning fun for them." She expressed that overall, "I think that was more meaningful for them."

The technical team motivates residential faculty members to utilize various Blackboard tools in order to better their performance as teachers. On this note, Philip said,

> In the training, you are motivated to use the tools for the sake of bettering your performance as a teacher. It is during the training that is where they motivate you to do things. Oh, they tell you that if you use this tool is going to make your life easier, it is going to make the students experience better, and so on. Yeah, but it is during the training. But it is not outside the training.

Valerie noted that she has encouraged residential faculty members to use various tools by highlighting the benefits they stood to enjoy when she said,

> I'm like, 'Let me just show you how much this will help you, you know. If you go and put all these quizzes online, as soon as you mark through all these or doing the scan trot

> or whatever, it is going to save you a ton of time.' And, you know, proving that to them, helping them adopt it.

Course evaluations may be a reason why residential faculty members go for training and use other Blackboard tools. Valerie identified students' evaluations as a motivation for residential faculty members to attend training workshops when she said,

> I think the other motivator I have had people show up is their student surveys. So, the end of course surveys, the students are not happy because they are not using this, or they are not using that. They are like, 'I gotta learn to do this because I'm getting bad surveys.' That is an incentive, you know.

This fact was apparent as Nicole recounted about her students. After using blogs in her classroom, Nicole was disappointed to note that her students "didn't mention it in the end of course evaluations."

Attending training workshops would benefit residential faculty members when building their portfolios. In motivating residential faculty members to attend training workshops, Valerie tells them, "'Look, if you do have all this on your portfolio, it shows that you are engaged, and you are!'" Residential faculty members receive completion certificates as Aaron mentioned,

> we send out certificates of completion. The faculty [members] are to self-report when it comes time to do their faculty portfolios, where they have their recertify their CVs every year. We just provide the supporting documentation on them to report where they are with those processes."

Alfred mentioned that residential faculty members are motivated to pursue training towards the use of other Blackboard tools pegged on a certificate. He said, "as far as your

professional development, something like, 'hey, hey, you got a certificate that you attended this!' But nothing like monetary or something."

Some other incentives have been used to encourage residential faculty members to learn and use other Blackboard tools. Food was mentioned by Aaron, Patrick, and Valerie as a motivator for encouraging residential faculty members to attend training. Cash has also been used as an incentive. Nicole noted that 10 years ago, she was fiscally motivated to attend a boot-camp training when she noted that "But they are they used to do a $500 incentive. So, the faculty would be paid $500 to complete the training." They would only enjoy the whole perk if they implemented what they learned in the training in their own classrooms. This was apparent when Nicole later explained:

> You only get part of it when you start; the other part is that you have to implement a new technology, and it could be Blackboard, it could be another technology, one of the technologies you have been trained in. And after you implement it, you show evidence that you implemented it, you can get the reimbursement of the rest.

For Paula, she would consider utilizing other tools if they meet a certain threshold. Talking about integrating other Blackboard tools in her class she mentioned,

> My motivation is time. So, if it is resourceful and it is effective and I know it is going to help me with time management, and it is not one more thing to add on, then I would be open to it. If it is something where this is not going to make my life any easier, and it is gonna just add one more thing to my plate, then I would say no, because my time is valuable.

Blackboard. This theme brings together five subthemes, which include the benefits of the Blackboard LMS, issues with the Blackboard LMS, easy to use, efficiency, and usefulness.

These subthemes tie together what participants recounted regarding the experiences of residential faculty members using the Blackboard LMS. Each of these subthemes will be discussed to show how they relate to the main theme.

Benefits of the Blackboard LMS. The Blackboard LMS was cited as useful to residential faculty members in that it availed them some benefits. One benefit was enhancing communication. Participants praised the Blackboard for aiding in the communication process with students. Through Blackboard, residential faculty members communicate with students what is required of them, and this is done at the beginning of every week. Alfred noted that "every week I post announcements and remind my students about any upcoming events that they need to attend." Paula said the same: "we had to do weekly announcements." Philip noted that the administration required the faculty to post announcements weekly when he said, "the chair may come in and say, 'Guys, remember you got to send out announcements on a weekly basis.'"

Archival data showed that residential faculty members frequently used some tools more than others. In data obtained from the Blackboard analytics and represented in Table 3 below, residential faculty members frequently used the grading tool more than other tools. Since the classes used digital textbooks, the data showed residential faculty members had more activity setting up the readings and assignments every week. Alongside uploading content on Blackboard, the data showed that residential faculty members used the LMS to make announcements to the students.

Table 3

Analytical Data showing Blackboard Usage among 5 Residential Faculty Members

Tools Used	Evelyn	Peter	Carol	Tabitha	Paul	Grand Total
Activities		3				3
Announcements	371	247	175	277	153	1359
Assessment	5	65	3		106	185
Assignments	429	195	256	106	460	1517
Communication Tools	22		10	41	78	156
Course Content	216	270	127	163	395	1433
Grading Tools	384	675	1415	966	828	4599
PowerPoint		39			48	87
Settings & Tools	300	848	102	21	104	1499
Textbook Readings	240	85	37	10	102	487
Users	15	5	4	29	45	98
Grand Total	1982	2432	2129	1613	2319	11423

Note: The names provided are pseudonyms of various faculty members teaching different residential courses. The numbers in the table represent the frequency of clicks these residential faculty members made in the course of their time on Blackboard in one semester.

A second benefit is that Blackboard LMS was useful for storage purposes. Philip described the Blackboard LMS as beneficial for the storage of learning materials when he said, "it just makes it a bit easier, that I do not have to keep files; somebody is keeping my files for me." When using blogs, Nicole noted that

> But Blackboard was helpful because it gave a place to, I told them, for archival and grading purposes. So that would be a record of it and that I could grade it. Because I would not want to grade something and give feedback and then they take the website down or something happens, you know, online. But Blackboard allows us to have that record. So, I appreciated that.

Another benefit of using the Blackboard LMS was that "it keeps everything together," as noted by Nicole. Paula described this in detail when she said,

> the good thing is that everything is on there. And students will be able to see when something is graded, they can see their attendance now, they can see all the announcements, all their instructions, all these; the syllabus is on there, everything is on there.

Issues with Blackboard. Some issues were mentioned relating to the Blackboard LMS. The test tool was mentioned as being problematic by some participants. Paula raised concerns with the online testing system when she said,

> One of the concerns that I have with the online quizzes or exams, especially, is the cheating factor. So, if, and I have had it before where I have used it in a residential class where they can take an online exam outside the class. So, I just say, automatically it is open book open notes. That way, I don't have to worry about cheating. Yes, they have the opportunity to look. But then I have changed that. And so, this semester in [course code]205, I have gone back to the classroom and they get to take it on hardcopy. I really feel like they are going to learn more because they are going to be able to put that down on paper, and also it is closed book.

Similarly, Michael was unhappy with the test feature on Blackboard arguing that it was inefficient with regard to saving time. This was apparent from his words when he said,

> I like efficiency. But the test, you have to go up and pick the kind of tasks you want to do. And then you start typing it in. It is a very slow process to load that stuff in there. And then you are trying to create all these questions. I do like you can categorize them by multiple-choice or whatever, but it just takes forever. You cannot just kind of load questions into it. That would save hours and hours of having to type the questions in!

Sometimes Blackboard freezes and affects users on the platform. Regarding this, Alfred noted, "I think the problem comes when is the network is saturated so that you are working and then it freezes. Sometimes you have to wait, and the changes are trying to make are not made because of a loss." Alfred further cited a case where he and his GSA suffered a loss of data when he said,

> I mean, one of the issues is among faculty—that they will take a lot of time to upload all the information or it is going to be lost. And that is something that we have, especially in this semester, that happened to me, it happened to my GSA. We were doing some grading and were giving some feedback and that feedback was lost, and the grading was lost. And the students reached out to me, 'Why haven't you graded these? Why, haven't you posted this?' And then going, 'but I did!' And the thing happened to my GSA. That could be the challenge that I have, you know, going back and redoing it again.

Participants were unsure whether the issue was with the Blackboard LMS or with the internet. Regarding this, Nicole observed, "Well, I know with my classes this semester, I have had students that have had tremendous problems with their video recording… and uploading them to Blackboard. Not really a problem with Blackboard it is just the video problem."

Overall, the Blackboard LMS was mentioned as having fewer issues compared to other technologies. Regarding this, Nicole said, "Blackboard usually works fairly well, I'll say, all things considered. I haven't had a lot of complaints with it so that's a blessing to me, thankful for, I guess. Outlook, on the other hand, it crashes all the time." Similarly, Michael underscored, "overall, it is a good program and system, but I cannot think of anything I raised other than why is that not doing this." On the same note, Paula said, "I really haven't had a whole lot of problems with Blackboard usage for residential." When asked to cite any issues he has had with the Blackboard LMS, Philip replied, "No, no, no issues."

Efficiency. Residential faculty members select to use certain tools for efficiency in their work. Efficiency was described, by Nicole, in terms of the ability of the tool to aid faculty members to "do things quickly so you can save time." In keeping with this theme, Alfred said he asks several questions, "How can I cut time when it comes to using the tools? What is a faster way that I can do…? How can I make it so everybody will see at the same time, so I don't have to go back and forth, back and forth, back and forth." Specifically, Michael hailed the 'needs grading' feature on Blackboard because using it,

> I can just click on that and see what I need to assign, or what has been submitted from the assignment. And it is just really quick as opposed to going in the grade book and trying to look through to find all the various things that are available.

Overall, Nicole shared that "faculty like to use like efficiency-related features of Blackboard that things that may help them to grade more quickly or to complete their work more quickly."

One other way Blackboard tools enhance efficiency is in communication. Nicole observed, "As far as efficiency, I think it helps with communication; having a way to

communicate with students between classes." She said this when talking about how announcements link with emails.

Easy. Beyond the tools being useful for their work, participants mentioned Blackboard tools as being easy to use. Regarding announcements, Michael mentioned that "It is easy." With regard to sending mass emails, Nicole said, "It is easy to send everyone up a global email without having to enter in all their emails." The Blackboard LMS has eased the process of making announcements to students by linking the announcement feature with the email. Michael explained the process of linking the two this way,

> So, I definitely use the announcements and I use that a lot. And I use it with the email function. So, you know, I check that box and that way I know they get it, I get a copy of it. If I don't get a copy of it, I know they didn't get it.

The fact that the announcement feature was linked with the email meant that "they have it in two places," as shared by Philip. Philip commended the function of Blackboard to store all announcements "Because there are people who delete the emails as soon as they see them. So, that is why I have kept a record of all the announcements we issued. So, that is useful." Although Philip liked that announcements "links with email," communicating with residential students both using announcements and email felt redundant for him. He said

> you say, 'But I meet them every week, do I have to announce?' 'Yes, you meet them, you tell them. And then you announce it.' 'Okay, fine.' But it is, you know, to me it is redundant, but they do not think so. Lately, you've got to remind them after you have told them.

Blackboard tools make the teaching process easy by simplifying the teaching responsibilities. Paula hailed the grade center for easing the grading process by comparing it to

the paper and pen method, where "I have to go back in and input the grades [in] Blackboard it is just automatically graded" [probably referring to quizzes or exams that have multiple-choice or true/false questions, which are the only assignments automatically graded on Blackboard]. Nicole affirmed the grading tool in Blackboard by comparing it to her past experience when she said, "When I first came, I graded some things like pen and paper, and then went back and put it in Blackboard. I do not do that anymore."

Blackboard was also hailed for easing the process of communicating the grade to students. Paula described the new Blackboard interface as helpful in that when she said, "when it comes to the grade center, they, I know with the new view this last year, it is all on that front. …they can see their grade." Philip indicated that he used tools to give students a chance to view their schedule "because I see them tracking; they track the schedule and they also track their grades."

Usefulness. As can be gathered from Table 4, all the residential faculty members interviewed for this study admitted that they frequently used the announcements, the course content, and the grade center tools. Nicole, Alfred, and Philip mentioned that they utilized the discussion board, SafeAssign, and journals minimally. Most of the participants said that while they were aware that the blogs, the chat, wikis, and the journal tools existed, they never utilized them in their classrooms. All the residential faculty members interviewed were not aware that Blackboard Collaborate existed. The reason is that the university chose to use other software in its place. Olivia mentioned that the university uses Kaltura, and two of the residential faculty members interviewed, Nicole and Michael, mentioned they use Kaltura.

Table 4

Blackboard Tools used by Interviewed Participants

Tools	Paula	Nicole	Alfred	Michael	Philip
Announcements	✓	✓	✓	✓	✓
Blackboard Collaborate	☐	☐	☐	☐	☐
Blogs	×	✓	×	×	×
Chat	☐	☐	×	×	×
Course content	✓	✓	✓	✓	✓
Discussion board	✓	✓	<	✓	<
Grade Center	✓	✓	✓	✓	✓
Journals	×	×	<	×	×
SafeAssign	✓	<	<	✓	<
Wikis	×	×	×	×	×
Other	Top Hat	Photo roster Embedded rubrics			Syllabus Top Hat

Note: ✓frequently used; × never used; < less used; ☐ not aware it exists in Blackboard

The usefulness of the various tools available to faculty members was a factor influencing whether residential faculty members would integrate certain Blackboard tools to integrate into their courses or not. Participants questioned the usefulness of discussion boards in residential classes. Paula observed that "I don't use the discussion boards anymore. I did at one point, but I don't anymore with residential. We do more discussion in the classroom." This same position was articulated by Philip who said, "In this course, since they are residential, we do not do much discussion online, but we do our discussion in class."

Regarding the use of discussion boards in residential classes, Valerie believed that they are relevant. On numerous occasions, she has communicated this with residential faculty members. This was apparent when she said, "So, you know, I try to share that with residential

faculty like, hey, do not think that discussion boards are just for, you know, the online world; students, that is what students do all the time" [meaning that they are constantly on social media].

Closely related, proximity to students was cited as a reason why some residential faculty members never explored the use of other tools. Audrey observed this when she said, "I mean, a lot of them in the residential side argue that, 'I'm in person, I'm with my students, I didn't want to teach online. So why do I need [to use other tools]?'" This was confirmed by the interview participants, Nicole, Paula, and Philip, who mentioned that the use of other Blackboard tools was unnecessary because they meet their students one-on-one in class. For example, Paula noted,

> Quizzes, I have on Blackboard. But exams, I have, I stayed with hardcopy. I have used online exams before, but I find and actually some students will say they prefer the hardcopy. It provides focus, and it provides attention for them with the hard copy.

Along with this, participants mentioned that they select certain Blackboard tools to integrate into their courses more than others because the tools they currently use work just fine. Michael noted that "I am still able to do the things I want to do particularly residentially. So, I have just not bothered digging into them." Philip said, "For the size of the class I am having, I think my tools are enough." After years of teaching the same courses, some residential faculty members were comfortable with the course structure they have built. For example, Paula mentioned that "I have kind of built my classes now where I can just keep the same skeletal structure." She indicated that she would think of any changes if she was creating a new course. Personnel from the IT noted this seeming complacency. To indicate that some faculty members were seemingly contented with what they have, Audrey said, "And if they are getting all they are required, and it is working, why change."

Residential faculty members would gladly consider using other tools if they were shown the value of the tools they were not using. For example, Michael noted that he did not utilize other tools because "I've not found value for them" and also that "it's not impacting my teaching." He, however, indicated that if he was made aware of the value of the tools he was not using, "How is that going to help the students and me in the educational process?" then he would be open to considering. On the other hand, Paula felt that "using a blog or chat or wikis, to me it would just take more time and attention away from the content."

There is importance for residential faculty members to be convinced that other tools have value for their work. Michael suggested that the IT department should market the tools to residential faculty members when he said, "I need to know that's where the value comes in: sell it to me." That way, the residential faculty members would be motivated to use the tools that are often unused. Participants from the IT department seemed aware of the need for marketing the tools to residential faculty members when they shared strategies of getting the instructors interested in learning about and using the various tools. Valerie put herself in the shoes of residential faculty members when she mentioned that

> I am a why girl. Like, I don't want you to tell me, "Do this". I want "Why am I doing this?" Like I want to, "is there value to what I'm doing?" If I am spending this time, the value is... in explaining to residential faculty, "Look, if you do have all this on your portfolio, it shows that you are engaged, and you are…."

This was also echoed by Harold who underscored the importance of incentivizing the training workshops through "communicating the value the technology can bring like saving time, yes, with specific use cases. I think showcasing the value that can bring."

Requirements. This theme came in relation to the university administration and their role in encouraging residential faculty members to use Blackboard tools. The university is committed to having faculty utilize technology. This was noted by Nicole when she said, "The university administration wants us to integrate more technology, to use your technology. They had the boot camps, they had incentives for the boot camps, you know, things like that." This commitment by the university will be evident in the theme labeled, technical team and support in the next few paragraphs.

Out of the five residential faculty participants interviewed, only one of them indicated they used other tools beyond the commonly used tools. Nicole mentioned that she has used the blog feature in her classroom with reported positive learning experiences for the students. However, she mentioned that the students failed to indicate that in their end-of-semester evaluations.

In my memos, I wondered what it would mean to residential faculty members if the university administration required them to learn other tools. This way, the faculty would be pushed to explore and use other tools available to them. In talking about the difficulty they have had to get residential faculty members to attend training sessions, Valerie noted that a nudge from the administration would probably be necessary when she said, "I mean, you do have to almost require it." Paula did not sound excited to talk about how her department had required all residential faculty members to learn and implement Top Hat in their classrooms. She described her experience of using Top Hat this way, "to learn Top Hat, and then making sure it syncs [with Blackboard], that was some frustration last semester."

Fear. This theme was more pronounced during the focus group meeting. Focus group members mentioned that residential faculty members sometimes feel intimidated by teaching

students who they think are more technologically savvy than they are. In her experience training faculty members, Valerie noted, "I think a lot of them feel intimidated to admit that in this day and age, that they don't know technology." This was corroborated by Nicole when she admitted that "at times you think, 'oh boy, they are so good with technology!' But actually, they have some challenges too."

Patrick added that sometimes faculty members are "afraid they are going to do something wrong and block the entire system, you know, and wreak havoc on everything we do." Philip admitted to this fear following an incident he had when he said,

> I think the only concern I have raised is, what if I click on the wrong button stuff vanishes. Because there are times if you click on a button, everything evaporates. What do I do? How do I find my lost material? So, I think I went through that once. During training, I think I hit a button and lost material and I had to go to some office in [office building where CAD is located] and they fixed it, and they reset it. I do not know how to reset it but they reset it and I was able to go back.

The fear of technology is apparent given that residential faculty members' knowledge of technology. Residential faculty members are required to have basic Blackboard skills as they are hired. Patrick mentioned that residential faculty members are required to have "minimal technical competencies…how to cut and paste, data management, manage things like that." Valerie added that

> I speak up from the hiring side of it. I have worked with several of them in that position over the years. I think part of the problem is, sometimes in these programs, there are limited applicants. So, you do not have, I mean you have to have this person that has these qualifications, but they have no, you know, technical abilities.

Participants indicated that they learned Blackboard on their own. Alfred mentioned that he "learned about Blackboard when I was in the school doing my own program, my undergrad, my bachelor's associate degree. I start learning using Blackboard. Since then I use Blackboard." When asked how she initially learned to use Blackboard, Nicole stated that

> As far as I recall, I think it was mostly trial and error. I did have a colleague who was really good with Blackboard, and she showed me how to do some of the more advanced procedures like copy a course, export your course, and that kind of thing. But mostly it was trial and error.

Alfred too mentioned that sometimes new faculty use trial and error when using the Blackboard when he said, "for a new faculty, that could be overwhelming because we were supposed to do. It took me maybe a couple of hours to figure things out there. Now I am getting used to." The development of courses on Blackboard was described as difficult for residential faculty members. Olivia described her experience of development of the courses in the following way,

> I kind of felt like maybe I was a faculty in a situation where I got thrown these shells, 12 of them, and they told me to build them and separate them and bring them back in. And I had no idea how to use it. I played around with everything. I fumbled at times, but that is okay. And then Sharon helped them fix it.

Having minimal technical capabilities may explain the frustrations that some residential faculty members at times exhibit. Audrey mentioned that "when they build their content within Blackboard, 'frustrating!' At least we see a lot of their comments and online."

Technical team and support. This theme was chosen to describe the technical team and the nature of technical support residential faculty members receive at the university. Each of

these is discussed in detail below under the subthemes dubbed supportive technical team and available support.

Supportive technical team. Three different kinds of technical teams available to support residential faculty members were identified as follows: the HelpDesk, the Center for Academic Development (CAD) and the Center for Teaching Excellence (CTE). Some participants were unsure whether CAD and CTE were the same or not following some changes in the university (Paula, Nicole, and Alfred, personal communication). However, they are the same given that the university website lists the two alongside each other in this manner, Center for Academic Development/Teaching Excellence. According to the university website, the two share the same physical address at the university. Interestingly, while some participants were unsure of the difference between the CTE and CAD, they did, however, accurately identified the physical address, the building, and the floor where they go to access technical support and training (Alfred, Michael, and Philip, personal communication).

The CTE works with residential faculty members in various ways. Their role includes providing training for residential faculty members (Patrick, focus group). They come alongside residential faculty members to encourage and support them while they build their courses on Blackboard. They also provide "drop-in support at any time for residential faculty here on campus" (Aaron, focus group). They do so by going to meet residential faculty members within their different academic department buildings across the university. This was a strategy developed after CTE noted that residential faculty members, Aaron, Audrey, and Patrick, struggled going over to the CTE office for help. Regarding the drop-in support they provide, Aaron said,

> So, if they have any issue, and some of them do, they want to come in and have somebody look at them and physically tell them, 'Okay, it is okay for you to click this button right here'. And to come along and just kind of be their advocate, you know, be their support system for them to be able to try things.

This drop-in support role was corroborated by Paula, a residential faculty member, who described the role of CTE as being the

> one that is more really telling me how to fix something and kind of guiding me. And they will send me a tutorial, or you know, how to set this up, or if I have a question, I can also walk down to them, and they can take a look at it for me as well.

The university website provides more details on the nature of the drop-in support. It also mentions different kinds of people within the CAD/CTE department responsible for helping residential faculty members, which are cited as follows:

> Additional drop-in support includes an in-office Instructional Designer who can help consult on course and assessment design, a Bb Specialist who can aide in LMS support and planning, an Educational Technologist who can help implement approved technologies, and Teaching support who can help plan professional development and/or improved pedagogical approaches. (University website, n.d.)

At the request of residential faculty members, CTE may provide confidential teaching observations on many areas including the integration of technology in their teaching (CAD, n.d.). Members of the technical team who participated in the focus group mentioned that they have done this for faculty members.

The technical team expressed their willingness to help when called upon. Regarding residential faculty members, Audrey said "I think if they reach out and say hey, I need help, they

will probably get some help. The participants described the technical team at the university in positive terms. Alfred noted that "they are usually very helpful when I call." Paula described the technical team this way: "I can always email them, and they have been very kind to send me a tutorial or an explanation if I have had a glitch or something like that." Further, she described them as being "really helpful." Regarding the university, Olivia said that "they do have a good support system for someone that is residential." Residential faculty members appreciate the help they get from the technical team. Aaron who works in the CAD said that

> our faculty are always very appreciative. … They express that. And, and it is neat, like Patrick said, to see when that aha moment happens with them, and then they come back and they talk to you about, "Hey, what you showed me, and, here is what I was able to do with this."

Some individuals in IT were described by participants in positive terms. A certain individual was mentioned by three participants as being particularly helpful. Michael described her as being "outstanding. And so, if I had a question, she was definitely the one to go to." The lady was assigned to work with residential faculty members (Nicole, personal communication) and worked also as a Blackboard trainer for the same group (Michael, Patrick, focus group). By the time of the interview, the lady may have been moved or left. Paula mentioned that "I used to go to an individual. She's no longer there but the ones that are there are helpful."

Available technical support. The university has provided residential faculty members technical support to aid them in their teaching responsibilities. This technical support comes in different formats namely, training workshops and tutorials. Each of these is discussed below.

The university, through the CAD, hosts several training workshops for faculty members to know how to use the various tools. Different names are used to describe aspects of the

training workshops. The different names are boot-camps, training, and workshops. For this study, I chose to use the term training workshops to describe all of them.

The CAD, as described by Aaron, offers "Blackboard boot-camps a couple of times a year," which residential faculty members can attend voluntarily. The boot-camps, which happens "several [times] per semester, deal with a specific topic of how to do video in Blackboard, or how to do this in Blackboard, or whatnot" (Aaron, focus group). Specifically, the CAD holds Blackboard training for all faculty members each new semester as a refresher (University Information Services, n.d.). For example, in September 2019, the CAD hosted a training that taught faculty members how to create and post announcements to students, how to set assignments on Blackboard in ways that it will reflect in the grade center, among others (CAD, n.d.).

The university website lists Blackboard assistance for residential faculty among the workshops conducted by CAD (CAD, n.d.). Information about upcoming training workshops is posted on the CAD/CTE website. Residential faculty members who are willing to undertake the workshops sign-up through the ProDev portal on the university website using their university email. Staff at the CTE capture that information and plan for training. Workshops, as noted by Patrick, are held at a certain building in the university (University website, n.d.). The training sessions posted online for faculty promise to show them easy ways to connect with students, encourage interaction and collaboration among students, use the flipped classroom, among others (University website, n.d.).

The university also has many online tutorials that faculty members can freely access in their time of need. These are freely accessible on the university website upon logging with the official credentials. The tutorials feature Blackboard and other technologically related content

(University, n.d.). For example, on the website, there is "a series of training videos on various topics and aspects of the Kaltura platform" (University, n.d., para. 1). While Valerie confirmed the availability of the online training videos, Patrick confirmed that they were meant for online faculty when he said, "On the online side, we have like online training shells. … We put them in our training shells and say watch the videos." That noted, residential faculty members are given access to the resources as Audrey noted, "They have videos and training available on the online side in CTE training."

Social support. Residential faculty members have certain individuals who have assisted them while they used different Blackboard tools. Some of them are students, also known as GSAs, who were assigned by the various departments to work with them. Sometimes residential faculty members have approached colleagues in the university for help towards using various Blackboard tools. These two subthemes are discussed below.

GSA. Residential faculty members have used or not utilized various Blackboard tools depending on whether they had GSAs or not. Compared to the residential faculty members, GSAs may have more knowledge of the various Blackboard tools. This is partly because it is required of them to have the knowledge; Philip mentioned that "the GSA has to be up to date." This requirement makes the GSAs go the extra mile and figure out how to use the Blackboard. Alfred mentioned that "when I started as GSA, I started learning on my own how to use Blackboard." The requirement may lead the GSA to seek Blackboard training or seek out answers from fellow GSAs. For example, Philip mentioned that when he worked as a GSA, they worked in a pool such that when stuck, he went to the GSA room,

and then ask my fellow GSAs and I say, "What do I do? I am lost here. I don't know, I can't find the list of my students." Or, "I don't know how to drop this student who has not been attending." They will say, "Okay." And they will discuss it among themselves.

Having a GSA solves the time mystery. Compared to the residential faculty members, Alfred assumed that GSAs have more time. He noted that "GSAs will have more time than the faculty. [Therefore,] they will try to learn on their own. And that is what I did when I started as a GSA. I started learning on my own how to use Blackboard."

Residential faculty members have used GSAs to set up their classes on Blackboard. Philip mentioned that "a lot of Blackboard is done by GSAs, on behalf of the teachers." Audrey had the hunch that "the instructors are not even often the ones who are doing the work in Blackboard. It could be the GSA. So, the GSA gonna be trying around and playing with, and maybe, maintaining that shell." Valerie was sure that GSAs are the ones who end up setting up the classes when she mentioned, "I've taught GSAs over the years because I knew they were the ones doing the work."

Others. Participants mentioned that residential faculty members have colleagues they go back to when they have Blackboard related concerns. Nicole said that "I did have a colleague who was really good with Blackboard, and she showed me how to do some of the more advanced procedures like copy a course, export your course, and that kind of thing." Alfred said that he sought help from his boss because she "knows more than me because she has been using Blackboard for longer. And so, I will reach out to her. 'How do you make changes? And she will explain to me, 'You have to go and do this, do this.'" Though he did not explicitly mention who he learned from, Michael said that "sometimes you will learn a little shortcut from somebody that you did not know. So that's helpful."

Residential faculty members indicated that they did not have a forum where they meet and share their experiences regarding Blackboard or the use of the different tools beyond the training workshops. However, Nicole felt that the training workshops may be a good forum for sharing experiences when she said, "The reason that I liked about the boot-camp because there is a lot of time for faculty to talk about how they are using that; again, it was a designated time for that."

While residential faculty members did not mention having a formally organized forum for discussing Blackboard and their experiences on it, it became apparent that they conversed informally among themselves regarding Blackboard. For example, Nicole mentioned that "You know how you can instead of attaching a rubric to a Word document and set them up in Blackboard, I have not actually used that. But I have some colleagues that really like that." Seemingly, she may have gained the perspective of her peers when they talked privately.

Regardless, residential faculty members challenge one another on improving their Blackboard and other technological skills. Michael mentioned that sometimes colleagues share experiences of their training when he said, "There was one colleague, a number of years ago who went through boot camp. And, you know, she kind of encouraged everybody to go through that. She said it really helped her. I'd say that's about it." Nicole showed an intention to share her training experience when she mentioned, "I need to recommend this boot camp to Joy if she has not already done it because it is awesome." Valerie cited one of the responses they get from faculty members after training when she said,

> It even spreads to their colleagues, you know, and then you get their colleagues to come, "Hey, I know you helped so and so do this. Can you help me do that in my class?" Or,

> '"I tried to do this. He showed me how, but I think I am missing something. Can you help me figure it out?"

Although Michael remarked that "nobody is really promoting Blackboard in any, like, 'Oh, you gotta see this on Blackboard' kind of stuff. I don't think that's ever happened," Nicole was of a different opinion. She mentioned that having gone through a boot-camp, the CTE

> used to invite me to come back every year to do my presentation on blogs. So, I would share with other faculty members about using the blog, the blog feature, and how to do it, and show an example of how I use it in my class. So, they have the previous faculty that completed their trainings come back to show other faculty how they are using it.

Research Questions Responses

The purpose of this single instrumental case study was to understand the differential use of Blackboard tools for residential faculty members at a large private nonprofit university in the Southeastern part of the United States. Towards that end, a central question and three sub-research questions were formulated and used. The responses to the questions based on the collected data are provided below.

Central Question

The central question for this study was: Why do residential faculty members select certain Blackboard tools to integrate into their courses more than others? Certain themes were identified as answering this research question. They include the following: time, Blackboard, social support, and requirements. These will be described below.

Time is one theme that answers the central question. Residential faculty members are unable to use other Blackboard tools beyond the commonly used because they were busy with other teaching responsibilities. This being the case, using other tools would mean additional

work for them. Being busy with other responsibilities made it difficult for residential faculty members to go and attend training workshops to learn how to use other tools.

The social support theme also partly explains why residential faculty members chose to use certain Blackboard tools in their courses more than others. The availability of GSAs was cited as partly contributing to residential faculty members selecting to use certain Blackboard tools over others. Having a GSA had a debilitating effect on the residential faculty members in that they relied on the GSAs to figure out what tools to use in the classroom. Alfred confirmed that

> the faculty will rely more on the GSA. And the GSA will try to figure out. And so, the pressure of learning on the faculty is kind of released because "I know that my GSA will figure out how to do it."

Residential faculty members chose to integrate certain Blackboard tools into their courses over others because they were required by the administration. Participants indicated that they used the tools that were required by the administration or by their department. For example, because the "Administration has been more focused on Top Hat," Paula learned to use Top Hat because her department required it of every faculty member. Similarly, Philip mentioned that

> Like last semester, it was the syllabus. They took us through the syllabus, and we understood how the syllabus now will work. One time we did the Top Hat because they were going to require it for taking attendance and instant quizzes and things like that.

Residential faculty members utilized the bare minimum of the available Blackboard tools beyond those tools required by the university. This was highlighted by Aaron who observed that "they are required to do very little Blackboard. They all are required to use, the grade center, post their syllabus, take attendance, and some of them just barely do that." Furthermore, the use

of certain tools was nurtured because the administration did not bother verifying what tools were being used. Asked whether the school administration ever comes to check on what tools he is using or not in his classroom Philip said, "No." To the same question, Michael said, "The Blackboard police aren't, at least I hope not." To the same question, Nicole noted that "online they check really closely, but as far as I know residential is not."

Another theme that answers the central question is Blackboard. Under this theme, participants described how the Blackboard LMS has been useful to their teaching. They also described some of the benefits of using the Blackboard LMS in their classes together with some minor issues they have had with the LMS. Because of these, participants indicated that residential faculty members chose to use certain tools and not others in their classes.

Sub-question 1

The first sub-question was: What personal factors would motivate residential faculty members to integrate certain Blackboard tools into their courses but not others that are available to them? As stated in Chapter One, this sub-question addressed the effort expectancy and the performance expectancy constructs of the UTAUT model. Two themes namely Blackboard and motivation were identified as answering this sub-question as discussed below.

The theme of Blackboard answers the research sub-question. Residential faculty members have selected some particular Blackboard tools over others because they do not count them useful to the courses they are teaching. Commenting on blogs and chat, Michael said, "It's not that I don't like blogs or chat or anything, it's just I've not found value for them." Paula mentioned that she does not use blogs or chats because "the assignments, don't give towards maybe using a blog or wikis."

Furthermore, residential faculty members selected to use certain Blackboard tools than others available to them because they were useful to their teaching process. This became apparent as the participants discussed different Blackboard tools they use. Under the subtheme of benefits of the Blackboard LMS, the announcement tool has widely been used among residential faculty members. Through the announcements tool, residential faculty members maintain communication with their students whereby they communicate important information to students. Nicole noted that "I like the announcements feature because if I want to remind them of something, I can just, I can send it out to everybody, and it will stay on the Blackboard." Alfred mentioned that he uses the Blackboard LMS to communicate

> any upcoming events that they need to attend or any, anything that is coming during that week whether it is a project, whether it is a discussion coming up or maybe where they have to do like a social work activity.

Blackboard is useful in the communication process because it has enhanced visibility. Regarding this point, Paula noted, "And so, it is not just me saying something in the class and they are also seeing it, and they have access." For this reason, Paula further said, "gone are the days when they did say, 'but I don't remember.' 'I didn't know,' right. Because it's right there if they are checking and they are going online." Philip corroborated this position and added that using the announcement tool was also helpful for ending complaints and excuses from students who may claim the professor failed to communicate when he said,

> in case somebody turns around and says, "I never got anything!" They can go back and see it in announcements. And since the announcements do not go away, they can go back, a month or two later and say, "I didn't see that!" I will say, "go back to announcements on such and such a day." "Oh, now I see it!"

Lastly, residential faculty members have personal reasons that motivate them to use other Blackboard tools. The goal of remaining relevant in the technology was mentioned as intrinsic motivation. Alfred mentioned that he goes out to seek for training because he wants to find out "'Is there a better way to do this instead of, you know, doing manually or so?'"

Sub-question 2

The second sub-question was: What external factors encourage residential faculty members to integrate certain Blackboard tools into their courses but not others that are available to them? This sub-question is based on the social influence construct and the facilitating conditions construct of the UTAUT model. Three themes answered this sub-question, namely, social support, requirements, and technical team and support.

Under the social support theme, it was established that residential faculty members were unaware of what tools their colleagues were using. For example, while commenting on his colleagues, Alfred admitted to this fact when he said, "I don't know exactly if they are using the whole tools." Also, participants shared that they would not talk about the Blackboard on normal conversations with their colleagues. For example, Philip admitted, "I do not bring up Blackboard, for me with my colleagues." Along the same line, Nicole noted, "nobody's really promoting, you know, Blackboard in any, like, 'Oh, you gotta see this on Blackboard kind of stuff,' you know. I don't think that's ever happened." Nonetheless, residential faculty members admitted that they had colleagues who encouraged to use other Blackboard tools. This was confirmed by participants from IT when they mentioned that they called in faculty members who had gone through their training workshops to share experiences with others for the sake of encouraging them that it can be done.

Having a GSA was mentioned as a contributing factor in using other Blackboard tools beyond the commonly used ones. Paula mentioned that

> I don't use rubrics. Like I don't use... I use rubrics, but I don't use the online rubrics, which I haven't created those. Why, because it takes time, I don't have a GSA. I use my own rubric set in Microsoft.

The GSAs have helped residential faculty members build their courses on Blackboard. And since GSAs may be more knowledgeable in the use of Blackboard than the faculty members they work for, they are more inclined to using other Blackboard tools. Valerie observed that residential faculty members would probably "use a new tool if they have a GSA that's willing to help them learn it."

The technical team has played a role in encouraging residential faculty members to use other Blackboard tools. They do so while they provide to faculty members drop-in support, when they provide confidential teaching observations, and when called upon by faculty members to help. Participants mentioned specific names of IT people who helped and encouraged them to use other Blackboard tools. Residential faculty members interviewed described the IT people in positive terms.

Residential faculty members have used other Blackboard tools because the administration required them to do so. The administration also encouraged them to attend training workshops. This was apparent when Alfred said,

> In every faculty meeting that we have they announce, "By the way, there are these meetings that are promoted through professional development and continuing education. Please go and attend this, especially the one that I require." So that is something that my department that chair or whoever is leading the meeting will make that announcement,

> "Please make sure that you take advantage of this training.'" They will encourage. But when it is required, "So now you have to attend those meetings, you have to attend those trainings, sorry."

On a rare occasion, an administrator helped a residential faculty member on a Blackboard related matter. Alfred mentioned,

> my boss knows more [Blackboard] than me because she's been using Blackboard for longer or longer time. And so, I will reach out to her, "How do you do that, how do you make changes?" And she will explain to me, "You have to go do this, do this."

Sub-question 3

The third sub-question was: What factors do residential faculty members believe would encourage increased utilization of Blackboard tools that are currently underutilized? The themes of Blackboard, requirements, and technical team and support were identified as answering this research sub-question. Each of these themes will be discussed to show how they answer the research question.

The subtheme of usefulness that is under the theme Blackboard was identified as answering this research sub-question. Residential faculty members would be willing to explore and use other Blackboard tools if the value of what tools they are not using is shown to them. This was well articulated by Michael when he said that it,

> goes back to value, what's the value in this tool? And here is why I think you should use it. Real brief. Look at it and go, "Oh, yeah! Okay, I see the value." Then I'm going to pursue it. They don't need to motivate me to go pursue it. They have shown me here is what that is. Now they may think it has a ton of value, but I think about how I teach, how I use Blackboard, and it is like, you know, "I can do this in class" kind of thing. So, in

> those cases, you know it may be that it is useful but not necessarily useful for me. But by and large, if it is got value, I'm gonna pursue it. I mean that is just part of the nature of being a good educator!

Focus group members also highlighted that residential faculty members need to be convinced of the value of the tools they are being encouraged to use. Regarding this, Aaron said, "You have to draw the connection, always, why, why do I need to know this? You have to answer that why question." In the same vein, Valerie added,

> I mean, I am a why girl. Like, I just, I do not want you to tell me, "Do this." I want, "Why am I doing this?" Like I want to "is there value to what I'm doing? If I am spending this time, the value is..." in explaining to residential faculty.

Expanding the discussion to include showing residential faculty members the value of attending a particular training, Harold further highlighted,

> Touching on the last question, too, which is that you are moving from, "You are required to do this," which I think a lot of times they get people to just come in and fill a seat and tick a box, to incentivizing it whether that is communicating the value that the technology can bring—if that is saving time, yes, with specific use cases. I think showcasing the value that can bring even ahead of the training helps to get them there. And that can incentivize. But then there are other types of incentives: monetary or other, other ways to incentivize the use of technology, or just getting people interested in learning more about them.

Another theme that answered this third sub-question was required. It was established that residential faculty members used Blackboard tools that were required by the administration. This was articulated by Aaron when he said, "There are some, there are some trainings that are

quote, ‘required’ or ‘strongly encouraged’ trainings. Those are always going to come down from provost office.” Alfred confirmed this in his statement, “Every semester, there is always training, and they will announce ‘It is encouraged for the faculty to attend those.’” All new faculty members are required to attend training workshops hosted by CAD/CTE. This was stated by Aaron when he said, “For new faculty, not only do they attend new faculty orientation, but they also go through a three-year cycle of faculty develop, their first three years new faculty development.” During the new faculty orientation, Aaron added that Blackboard is a key component of that.

There is a high likelihood for residential faculty members to use Blackboard tools they learned from the training workshops. When asked why they did not use some tools in the Blackboard, Alfred said, “I guess is because it is not emphasized in the training. At least when I went through the trainings, they didn’t cover that.” Michael reckoned, “I really don’t think I’ve ever got trained in what are those functions.” Conversely, Nicole mentioned that “The boot camp was one of the best trainings I have ever done. I used the blogs a lot. And I have actually became a blogger for the American Counseling Association. And so, it really got me into blogging.” Therefore, there are chances that residential faculty members will use tools learned in the training workshops.

Summary

The purpose of this single instrumental case study was to understand the differential use of Blackboard tools for residential faculty members at a large private nonprofit university in the Southeastern part of the United States. Data was collected using semi-structured interviews, focus group, and archival data. In this regard, five residential faculty members were interviewed, and seven information technology administrators and designers and faculty support coordinators

participated in a focus group meeting. Archival data was drawn from the university website and the institution.

This chapter described the participants who took part in this study together with a brief description of the procedures used to collect and analyze the data. Also provided are the key findings of this study. Seven themes were identified after an analysis of that data. They include time, Blackboard, motivation, technical team and support, social support, requirements, and fear. The key themes answering the central question of this study are time, Blackboard, social support, and requirements. Blackboard and motivation were identified as answering to sub-question one. The second sub-question is addressed by social support, technical team and support, and requirements themes. The themes of Blackboard, requirements, and technical team and support were identified as answering the third sub-question.

CHAPTER FIVE: CONCLUSIONS

Overview

The purpose of this single instrumental case study was to understand the differential use of Blackboard tools for residential faculty members at a large private nonprofit university in the Southeastern part of the United States. Data for this study was drawn from residential faculty members, IT administrators/designers, faculty support coordinators, and documentary analysis. This chapter presents a summary of the research findings, a discussion of the findings in light of theoretical and empirical literature, implications (theoretical, empirical, and practical) of the findings, and delimitations and limitations of this study.

Summary of Findings

This section provides a concise summary of the findings from this study. Each of the research questions is stated and briefly answered using data collected for this study. Data was collected using semi-structured interviews, a focus group meeting, and analysis of archival data. Seven themes were identified from an analysis of the collected data. They include the following: time, motivation, Blackboard, training and support, social support, requirements, and fear.

The central question for this study was: Why do residential faculty members select certain Blackboard tools to integrate into their courses more than others? The following themes answered this central question: Blackboard, fear, requirements, and time. A brief description of how each of these themes answers the central question is provided below.

Under the theme of time, participants described residential faculty members as busy in their work schedules. Being busy contributed to a decision by residential faculty members to use the commonly used tools and not others available to them. Learning and using other Blackboard tools beyond the ones required by their department would mean additional work for them.

The theme ‘Blackboard’ answers the central question. Participants indicated that residential faculty members use certain Blackboard tools in their courses over others available to them because the tools they used were useful to them. The usefulness of various Blackboard tools made residential faculty members determine what tools were necessary for their classrooms or not. Some of the residential faculty members decided they did not need to use other tools because what they had were sufficient for their teaching responsibility. Nonetheless, participants recounted some of the benefits of using tools in the Blackboard LMS and some issues that they encountered, which did not deter them from using the tools. Among the aspects of the Blackboard LMS they liked, was that the tools were easy to use and efficient.

Participants noted that residential faculty members learn and use Blackboard tools that are required by the administration. This was reflected in the theme ‘requirements.’ The theme ‘fear’ may also explain the decision by residential faculty members to use certain tools.

The first sub-question was: What personal factors would motivate residential faculty members to integrate certain Blackboard tools into their courses but not others that are available to them? Blackboard and motivation were identified as the themes answering this research sub-question. Participants indicated that residential faculty members use Blackboard tools because they are easy to use and that they are efficient in saving them time. These two factors were reflected as participants talked about the benefits and issues noted with the Blackboard LMS. Residential faculty members were personally motivated to learn and use other tools to remain on the cutting edge of technology.

The second sub-question was: What external factors encourage residential faculty members to integrate certain Blackboard tools into their courses but not others that are available to them? Social support and technical team and support were identified as answering this

research sub-question. Participants mentioned that residential faculty members had persons they went to for help with technical issues related to the Blackboard LMS. They mentioned that occasionally, residential faculty members challenged one another towards the use of other Blackboard tools. The technical team plays the role of encouraging residential faculty members to use other Blackboard tools. They come alongside residential faculty members to provide support, suggestions for technical improvements, technical help, and training. Residential faculty members described the technical team in positive terms.

The third sub-question was: What factors do residential faculty members believe would encourage increased utilization of Blackboard tools that are currently underutilized? In answering this sub-question, the themes of Blackboard, technical team and support, and requirements were identified. Under the theme of Blackboard, residential faculty members would gladly consider using other tools if they were shown the value of the tools they were not using. The administration has played a role in encouraging residential faculty members to use other Blackboard tools. Residential faculty members used Blackboard tools that were required by the administration. They can use other tools if required to do so. Attending training workshops will increase the likelihood of residential faculty members utilizing other Blackboard tools that are currently underutilized. The technical team has provided opportunities for training and support for residential faculty members to make that move.

Discussion

This section discusses the study findings and its implications in light of the UTAUT theory and other empirical literature. The UTAUT model was used in this study and it guided in the formulation of the research questions. The study findings are discussed taking into consideration what other previous studies have found.

Empirical Literature

Previous studies found that faculty members commonly use Blackboard tools to push information and content to students (Dahlstrom et al., 2014; Galanek & Gierdowski, 2019; Walker et al., 2016). In tandem, this study has confirmed that residential faculty members use certain tools and not others available to them. Participants and analytics data showed that residential faculty members frequently used the following Blackboard tools: announcements, grade center, course content, and assignments (see Table 3 and Table 4).

Along with this, the findings in this study showed that residential faculty members used a few collaborative tools in their classrooms. For example, participants in this study mentioned that they used discussion boards sparingly in their classrooms while some said they have never used wikis and chats (see Table 4). When asked about why they did not use other collaborative tools, participants in this study still cited their proximity to the students as a reason. Previous research has shown that faculty members can use discussion boards to evaluate whether students are learning (Washington, 2017). Discussion boards can help encourage debates among students (Ioannou et al., 2015). Valerie, a participant in this study, confirmed this position using the following example,

> A faculty, residential faculty member shared with me that she uses discussion boards in Blackboard to start a discussion. …then when they got to class, there was much more lively discussion between the students in person, because they already researched the topic, and they had already started like this thread of discussion online.

Since residential faculty members meet their students face-to-face in the classrooms, the need for some collaborative tools such as Blackboard Collaborate is minimized (Galanek & Gierdowski, 2019). Given their experience in teaching both online and residentially, some

participants in this study mentioned that some collaborative tools would be more useful when used in online education. For example, when asked about the use of blogs and chats, Alfred said, "I prefer just to address anything in class because I would use these more for one is an online course instead of the residential class." Regarding discussion boards Philip said,

> But teaching online is different. When I did teach online, the discussion board was used more, because we didn't know each other, we never met; we were learning about each other through that string of discussion. But residentially, it does not help to have a discussion board. We meet in class and we talk.

Synchronous tools such as Blackboard Collaborate, therefore, would be more meaningful in an online learning environment so as to allow real-time learning (Jones, 2016; Tonsmann, 2014). Nonetheless, when the tools were used in asynchronous learning environment, students noted that they were instrumental in enhancing social presence and collaborative learning (Chen, Dobinson, & Sarah, 2019; Kilpatrick, 2019; Yamagata-Lynch, 2014). This would explain the limited use of collaborative tools established in this study.

Even with the adoption of LMS increasingly becoming a commonplace in higher education, studies show that faculty members still prefer the traditional face-to-face model. A study by Galanek and Gierdowski (2019) that sampled over 10,000 faculty members across 7 countries showed that while "51% of faculty prefer a blended teaching environment, i.e., one with online and face-to-face components [,] 73% prefer a teaching environment that is either completely or mostly face-to-face. Only 9% of faculty prefer to teach mostly or completely online" (para. 2). This study shows that proximity to students is an important aspect of teaching and learning to most faculty members.

The use of other technologies alongside the LMS is a growing trend in higher education. Studies are showing an increased interest in the use of smartphones in the classroom for learning purposes (otherwise known as mobile learning) (Burch & Mohammed, 2019; Davison & Lazaros, 2015). In this study, Paula and Philip mentioned that their departments had required that they learn and use Top Hat in their classrooms. Philip mentioned that Top Hat was useful in taking attendance and administering quizzes and surveys when he said,

> But the big classes we have been using the top Hat. It is great to give quizzes and to do instant survey. Sometimes you want to know the mind of our students. So, you just do an instant survey on Top Hat. The statistics come up on the spot and the students can reflect on, "Oh, okay! That is what everybody is thinking."

The theme of time highlighted the reason residential faculty members use certain tools and not others available to them. Participants in this study, Alfred, Michael, and Paula, mentioned that residential faculty members are busy with other teaching-related activities, and this impacted their ability to learn and use other Blackboard. Related studies highlighted faculty members failed to use Blackboard because they had a high teaching workload to manage (Al Meajel & Sharadgah, 2018; Al-Naibi et al., 2015).

In this study, some participants, Nicole, Michael, and Paula, mentioned that they did not attend training workshops to learn other tools because that may mean another thing to add to their already busy schedules. In a previous study, Al-Meajel (2018) cited a lack of time among faculty members as a barrier towards the use of the Blackboard LMS at a university in the Middle East. Chow et al. (2018) mentioned that residential faculty members did not seek training to learn to use other tools because it signaled an addition to their workload.

This study has extended the findings of previous research by adding more details to the reasons why residential faculty members utilized the tools they do. Given that previous studies investigated this phenomenon of the use of Blackboard tools using quantitative methods (Chow et al., 2018; Fathema et al., 2015; Rienties et al., 2016), this research study extended on previous research by providing an in-depth understanding of the phenomenon because I used a qualitative method to investigate the phenomenon.

Theoretical Literature

This study used the UTAUT model to guide the structure of the study and the formulation of the research questions. The UTAUT model was developed by Venkatesh et al. (2003). Other previous studies used the UTAUT model in their theoretical framework (Moonsamy & Govender, 2018; Radovan & Kristl, 2017).

The study by Al Meajel & Sharadgah (2018) showed a difference in the use of Blackboard tools across various academic ranks with those on the lower ranks showing a less likelihood of using Blackboard tools. This study was focused on exploring why residential faculty members use certain tools and not others available to them. While this study highlighted the aspects of age and experience of the participants, they were, however, not the main focus.

Though self-efficacy is not taken as a direct determinant of an intention of use in the UTAUT model, computer self-efficacy was identified as an independent variable influencing behavioral intention to use technology (Venkatesh et al., 2003). This concept was encapsulated in the theme of fear in this study as influencing the proclivity of faculty members using other Blackboard tools beyond the ones they commonly use. In a study, Buchanan, Sainter and Saunders (2013) identified internet self-efficacy as a factor affecting the use of learning technologies among faculty members in universities in the United Kingdom.

In their study, Moonsamy and Govender (2018) noted that time was a factor influencing how the various constructs in the UTAUT model played out. They noted,

> While most items that measured facilitating conditions were positive, the adoption rate is low. On closer examination of the write-in-comments from the open-ended question revealed an important aspect. Time required to attend Blackboard training and to set up an online classroom was not enough. Huge workloads emerged as not having sufficient time to be innovative. (p. 3081)

This study noticed a similar trend. While residential faculty members may be desirous of using other Blackboard tools in their classrooms, sometimes they are not given sufficient time to implement the same. Patrick mentioned that residential faculty members sometimes go through this experience when he cited the following example,

> I think sometimes, too, it is tough going with the timing. I was surprised when I started on CTE when I was teaching professors in August who had been hired in August. Your classes start two weeks from now. We give them a shell with someone else's content in it.

Coupled with many of them joining the institution with limited knowledge of technology and of the Blackboard (Valerie, focus group), even though they get help from CTE, it is possible to see why they end up frustrated with the process (Audrey, focus group). The issue of time, therefore, seems to come into play when considering the various constructs and moderating factors of the UTAUT model.

Implications

This section addresses the theoretical, empirical, and practical implications of the study. Each of these is discussed here below. Specific recommendations for various stakeholders are highlighted.

Theoretical Implications

This study utilized the UTAUT model, which was developed by Venkatesh et al. (2003). The UTAUT model constructs and moderating factors were reflected in this study. The key constructs and moderating factors will be discussed separately.

The key constructs in the UTAUT model played out differently in this study. Since these were used in developing the research questions, most of the themes identified in this study address the various constructs. For example, the performance expectancy construct was addressed in the Blackboard theme. The effort expectancy was pronounced in the easy and efficient subthemes, which are contained in the Blackboard theme. Social influence was captured in the social support theme and partly in the issues with the Blackboard LMS subtheme in the Blackboard theme. Facilitating conditions were covered in the requirements, and technical training and support themes.

Four moderating factors were identified in the UTAUT model as predicting the behavioral intention and use of technology. They include age, gender, experience, and voluntariness (Venkatesh et al., 2003). Age was described as a factor influencing the behavioral intention and use of other Blackboard tools. Focus group members mentioned that age is a factor influencing the attitudes on technology. Audrey said,

> I think the faculty on the residential side that I've talked with, what I've seen, to me, is that generational gap. You know the younger ones obviously they are into the

technology; they get. And then you've got, you know, a lot of the older residents. Really, they are amazing but as it were, they don't, they don't see the need for. So those are the ones that are at the back reading the news or doing something else.

Compared to participants who indicated to be aged between 51-65 years, participants aged between 36-50 years were more open to seeking out more training and to the use of other Blackboard tools not commonly used. For example, both Nicole and Alfred, who identified as aged between 36-50 years, mentioned that they had attended a technological training boot-camp in the recent past. Furthermore, Nicole had put to practice the use of a tool she learned.

There was a noteworthy difference in the way experience impacted the behavioral intention and use of other Blackboard tools. For example, of the five participants interviewed, four of them had over 10 years of teaching experience. Michael and Paula indicated an interest to explore the use of other Blackboard tools if shown the value of the tools. Alfred was required to attend training because he was considered new to the institution. Because he was new, he showed an interest to learn and explore the use of other tools. The combination of age and experience may explain Nicole's proclivity to use other Blackboard tools.

This study did not find any significant difference in gender as influencing participants' behavioral intention and use of Blackboard tools. Voluntariness played out in this study when interviewed participants, Alfred, Paula, and Philip, indicated they used Blackboard tools that were required by the administration. Beyond that, and when not required, residential faculty members were said to use the commonly utilized Blackboard tools.

Empirical Implications

Just like previous studies have shown, this study showed that residential faculty members used certain Blackboard tools in their classrooms and not others available to them. The

commonly used tools are announcements, course content, grading center, and assignments. Participants argued that they used less of the collaborative tools because they meet their students face-to-face. Having established that 90% of all the students that enrolled at 4-year public institutions and 87% of those in private nonprofit institutions in fall 2017 were aged below 25 (NCES, 2019b), residential faculty members are more than likely going to meet digital natives in their classrooms. Studies have shown that age is not the only determinant of a digital native (Akcayir, Dundar, & Akcayir, 2016; Lai & Hong, 2015). A characteristic among digital natives is that they "are technologically savvy and carry an arsenal of technology in their mobile devices; [and that] they also prefer a collaborative learning environment where they can interact with their peers" (Sarkar, Ford, & Manzo, 2017, p. 3).

Practical Implications

This study established that residential faculty members feel overloaded with academic tasks, which makes it harder for them to seek out opportunities to learn and use other Blackboard tools. Administrators may need to find ways to hear and address this concern. There are inexpensive ways of meeting residential faculty members in the middle. For example, a participant mentioned that she does not have a GSA. It may be that everyone may utilize other Blackboard tools if all residential faculty members are provided student assistants to assist in their teaching roles.

Along with this, this study has revealed that residential faculty members will learn and implement Blackboard tools that the academic department or school requires. Residential faculty members resort to using the minimal Blackboard tools because the administration does not check on what tools they use. Perna and Ruiz (2016) argued that institutional leadership is necessary to regulate apathy or stem resistance from faculty members. Since universities are

investing heavily in acquiring and providing technology for use in education and benefit of the students and given that more students in the classrooms may be categorized as digital natives, administrators may consider non-compulsive ways of encouraging or motivating residential faculty members into using more Blackboard tools. Some of those non-compulsive ways include the use of incentives such as the provision of teaching assistants, a percentage raise of their salary, or a formal recognition such as the dean or president's award. A related suggestion would be for the administration to increase the supervision of residential faculty members just as they have done on the online side. This was confirmed by Nicole when she noted that "online they check really closely, but as far as I know residential is not."

This study revealed that the university under study has invested in technology and into the professional development of its staff. The study revealed that residential faculty members have lots of opportunities to develop their skills in the use of different Blackboard tools. Furthermore, the university has a technical team that is willing, able, and responsive to residential faculty members' technical needs. Residential faculty members should take advantage of the available professional development opportunities for the betterment of their teaching responsibilities. Since residential faculty members demonstrated a proclivity to pursue the use of other Blackboard tools if shown the relevance to their teaching, the technical team should seek ways to market different tools to the faculty with a view of encouraging them to use them. A way they may market the tools is by asking residential faculty members who have successfully implemented particular tools in their classrooms to share with their peers their experiences and what difference it made in their teaching. Residential faculty members will speak the same language with their peers. Michael had an issue with the way the technical team did in the past arguing that "But, you know, it is engineers doing it not users," probably meaning

that they were overly technical. Another way the technical team may market the tools to the residential faculty members is by scheduling regular meetings with them (preferably twice a semester or academic year) so the technologists can advise the faculty on which Blackboard tools may be useful to a specific class. Alternatively, the technical team may engage digital native students and the residential faculty members in a forum to discuss what tools may be relevant for enhanced learning.

Delimitations and Limitations

A delimitation of this study was that it was a single instrumental case study. This particular research design was chosen to understand the contextual factors behind residential faculty members' differential use of Blackboard tools. In this regard, the researcher, who was the main instrument for this study, met participants in their natural work setting to better understand the contextual factors that contributed to the phenomenon. A case study was also chosen to give participants a chance to describe their perspective and also to get an in-depth understanding of the phenomenon.

Another delimitation of this study was regarding the participants chosen to participate in this study. The focus of this study was on residential faculty members because they are the subject of this study. Other persons who took part in this study are faculty support coordinators and IT administrators and designers who were chosen based on their close working proximity and interaction with residential faculty members. Students were not included as participants in this study even though they are the beneficiaries of the use of different Blackboard tools. Also not included in this study were departmental heads and other university administrators supervising the residential faculty members.

A limitation of this study was the scope of Blackboard tools. In this study, I examined the phenomenon (the differential use of Blackboard tools) with no specific Blackboard tools in focus. While this gave the participants a chance to speak about which tools they individually use, focusing the study on certain tools would probably have provided a different perspective and probably more detail on the use of the chosen Blackboard tool.

Recommendations for Future Research

Since this study was a single instrumental case study, future studies may consider exploring this phenomenon using a multiple case study research design. This will probably lead to an even further in-depth understanding of the phenomenon. Furthermore, since the study was conducted at a large private nonprofit university in the Southeastern part of the United States, a replication of this study in other institutions outside this area or even outside the United States may give a deeper understanding of the phenomenon in other contexts.

This study examined the differential use of Blackboard tools for residential faculty members. No specific Blackboard tools were in focus. Future studies may investigate how residential faculty members use certain specific Blackboard tools. The study may examine this phenomenon across different academic departments.

Furthermore, future studies could examine the phenomenon explored in this study controlling for other aspects such as age and experience of the residential faculty members. This study unearthed the role of GSAs in the teaching process. Future studies may investigate this same phenomenon among residential faculty members with GSAs to see whether similar themes will emerge. The GSAs may take part in the study as participants.

This study explored the views of residential faculty members, faculty support coordinators, and IT administrators and designers. Future studies could investigate other

stakeholders such as students and university administrators. This will contribute to gaining a different or more understanding of the reasons behind residential faculty members' use of Blackboard tools. There is a need for further studies to investigate deeper how residential faculty members navigate to bridge the gap between digital native students and residential faculty members who exhibit digital immigrant characteristics. My study did not delve deeper into this issue. Probably, a study examining students' experiences in classrooms where residential faculty members use minimal Blackboard tools would be helpful to unearth students' perceptions and experiences of the phenomenon.

There are other LMSs available in the market. Menard (2020) reported that Canvas had taken over the LMS market in the US and Canada while Hill (2017) mentioned that Moodle was the LMS of choice outside North America. Since this study investigated the differential use of tools within the Blackboard LMS, future studies could examine the phenomenon in contexts that use Canvas, Moodle, or other forms of LMS.

Summary

The purpose of this single instrumental case study was to understand the differential use of Blackboard tools for residential faculty members at a large private nonprofit university in the Southeastern part of the United States. After analyzing the data collected, seven themes were identified. They include time, motivation, Blackboard, training and support, social support, requirements, and fear.

Just as empirical data showed, this study showed that residential faculty members used certain Blackboard tools in their classrooms more frequently than others. Participants in this study still cited their proximity to the students as a reason for the differential use of the Blackboard tools. This study found other reasons for this differential use were fear, time,

requirements, and other factors related to the Blackboard LMS itself. Since most of the students enrolled in HEIs are under the age of 25, more than likely residential faculty members will be interacting with digital natives in their classrooms. The use of various Blackboard tools will be necessary to engage the students, who are known to prefer collaborative learning.

Since residential faculty members demonstrated a predisposition to pursue and use other Blackboard tools if shown the relevance to their teaching, the technical team should seek ways to market different tools to the faculty members with a view of encouraging them to use them. Time was mentioned as a factor standing in the way of achieving this goal. The administration should find ways to encourage or motivate residential faculty members to use other tools beyond what they normally use.

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APPENDIX A: IRB Permission Letter

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

October 15, 2019

Stephen Mwendwa Kitoo
IRB Exemption 3973.101519: Residential Faculty Members' Differential Use of Blackboard Tools: A Case Study

Dear Stephen Mwendwa Kitoo,

The Liberty University Institutional Review Board has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under exemption category 46.101(b)(2), which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:101(b):

> (2) Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met:
>
> > (iii) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by §46.111(a)(7).

Please note that this exemption only applies to your current research application, and any changes to your protocol must be reported to the Liberty IRB for verification of continued exemption status. You may report these changes by submitting a change in protocol form or a new application to the IRB and referencing the above IRB Exemption number.

If you have any questions about this exemption or need assistance in determining whether possible changes to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,

G. Mi.'...B ker, MA, CIP
Administrative Chair of Institutional Research
Research Ethics Office

LIBERTY
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Liberty University | Training Champions for Christ since 1971

APPENDIX B: Faculty Recruitment Letters

[Month] [Date], 2019

Faculty
[Name and Address of University]

Dear [Recipient]:

As a graduate student in the School of Education at Liberty University, I am conducting research as part of the requirements for a Doctor of Philosophy degree in Education. The purpose of my research is to examine why residential faculty members select certain Blackboard tools to integrate into their courses more than others. I am writing to invite you to participate in my study.

If you are a residential faculty who uses or used Blackboard for teaching, if you are between the ages of 18 and 65 and you are willing to participate in this study, please click on the link provided below to complete an online survey. After you complete the survey, I will get an alert in my email upon which I will guide you on the way forward.

Please click on this link to complete the survey.

Sincerely,

Stephen M. Kitoo
Doctoral Candidate

INFORMATION TECHNOLOGY ADMINISTRATOR/DESIGNER RECRUITMENT LETTER

[Month] [Date], 2019

Information Technology administrator or Information Technology designer
[Name and Address of University]

Dear [Recipient]:

As a graduate student in the School of Education at Liberty University, I am conducting research as part of the requirements for a Doctor of Philosophy degree in Education. The purpose of my research is to examine why faculty members select certain Blackboard tools to integrate into their courses more than others. I am writing to invite you to participate in my study.

If you work as an Information Technology administrator/designer at the [name withheld] University, currently work on/with Blackboard or Blackboard related matters at the university, if you are between the ages of 18 and 65 and you are willing to participate in this study, please click on the link provided below to complete an online survey. After you complete the survey, I will get an alert in my email upon which I will guide you on the way forward.

Please click on this link to complete the survey.

Sincerely,

Stephen M. Kitoo
Doctoral Candidate

FACULTY SUPPORT COORDINATOR RECRUITMENT LETTER

[Month] [Date], 2019

Faculty Support Coordinator
[Name and Address of University]

Dear [Recipient]:

As a graduate student in the School of Education at Liberty University, I am conducting research as part of the requirements for a Doctor of Philosophy degree in Education. The purpose of my research is to examine why residential faculty members select certain Blackboard tools to integrate into their courses more than others. I am writing to invite you to participate in my study.

If you work as faculty support coordinator at the [name withheld] University, you are currently working with a faculty member or faculty members, if you are between the ages of 18 and 65 and you are willing to participate in this study, please click on the link provided below to complete an online survey. After you complete the survey, I will get an alert in my email upon which I will guide you on the way forward.

Please click on this link to complete the survey.

Sincerely,

Stephen M. Kitoo
Doctoral Candidate

APPENDIX C: Screening Survey

RESIDENTIAL FACULTY MEMBERS' DIFFERENTIAL USE OF BLACKBOARD TOOLS: A CASE STUDY

I am seeking for individuals to participate in the above-mentioned study. Please answer the following questions accurately to guide the researcher as to whether you are eligible to take part in the study.

1. I am a faculty member at the selected university
    a. Yes (If this answer is selected, proceed to question 2)
    b. No (If this answer is selected, proceed to the next question)
2. I teach residentially in the university
    a. Yes (If this answer is selected, proceed to question 7)
    b. No (If this answer is selected, proceed to the next question)
3. I work as an Information Technology Administrator
    a. Yes (If this answer is selected, proceed to question 6)
    b. No (If this answer is selected, proceed to the next question)
4. I work as an Information Technology Designer
    a. Yes (If this answer is selected, proceed to question 6)
    b. No (If this answer is selected, move to the next question)
5. I work as a faculty support coordinator
    a. Yes (If this answer is selected, proceed to question 6)
    b. No (If this answer is selected, and none of question 1 and 2 was answered Yes, the survey ends)
6. I work for the selected university
    a. Yes (If this answer is selected, proceed to question 8)
    b. No (If this answer is selected, the survey ends)
7. I use Blackboard for teaching
    a. Yes (If this answer is selected, proceed to question 8)
    b. No (If this answer is selected, the survey ends)
8. I currently work on/with Blackboard or Blackboard related matters at the university

   a. Yes (If this answer is selected, proceed to question 10)
   b. No (If this answer is selected, proceed to question 9 or the survey ends if questions 3 or 4 were selected as Yes)

9. I am familiar with the Blackboard learning management system
   a. Yes (If this answer is selected, proceed to question 10)
   b. No (If this answer is selected, the survey ends)
10. I am willing to participate in this study
   a. Yes (If this answer is selected, the survey ends)
   b. No (If this answer is selected, the survey ends)
11. Thank you for participating in the quick survey.

APPENDIX D: Acceptance and Non-Selection Reply Letters

ACCEPTANCE LETTER FOR FACULTY MEMBERS

[Month] [Date], 2019

Faculty
[Name and Address of University]

Dear [Recipient]:

Thank you for completing the online survey and for your interest to participate in a research study to understand why residential faculty members select certain Blackboard tools to integrate into their courses more than others.

Following the online survey you completed, I am pleased to inform you that you have been selected to take part in a semi-structured interview. Congratulations! The interview should take approximately 45 minutes to one hour. Your name will be requested as evidence of your participation, but the information will be kept confidential using a pseudonym of your name and the university you work for.

If you are still interested to participate in this study, click on this link to complete and return the consent document to me, the researcher. The consent document contains additional information about my research. Once you complete and electronically sign the consent document, I will be prompted with an email after which I will contact you to schedule the most convenient time for the interview.

Thank you again for your willingness to participate in this study.

Sincerely,

Stephen M. Kitoo
Doctoral Candidate

ACCEPTANCE LETTER FOR INFORMATION TECHNOLOGY DESIGNERS OR ADMINISTRATORS AND FACULTY SUPPORT COORDINATORS

[Month] [Date], 2019

Faculty
[Name and Address of University]

Dear [Recipient]:

Thank you for completing the online survey and for your interest to participate in a research study to understand why residential faculty members select certain Blackboard tools to integrate into their courses more than others.

Following the online survey you completed, I am pleased to inform you that you have been selected to take part in a focus group. Congratulations! The focus group meeting should take approximately 45 minutes to one hour. Your name will be requested as evidence of your participation, but the information will be kept confidential using a pseudonym of your name and the university you work for.

If you are still interested to participate in this study, click on this link to complete and return the consent document to me, the researcher. The consent document contains additional information about my research. Once you complete and electronically sign the consent document, I will be prompted with an email after which I will contact you so that we can schedule the most convenient time for the focus group meeting.

Thank you again for your willingness to participate in this study.

Sincerely,

Stephen M. Kitoo
Doctoral Candidate

NON-SELECTION REPLY LETTER

[Month] [Date], 2019

Faculty
[Name and Address of University]

Dear [Recipient]:

Thank you for completing the online survey and for your interest to participate in a research study to understand why residential faculty members select certain Blackboard tools to integrate into their courses more than others.

Following the online survey you completed, I regret to inform you that you were not selected to participate in this study. As you may have gathered, the criteria for participating in this study is very specific. Arriving at this decision was not easy. This decision does not, however, disqualify you from future projects. Your perspective has value and importance.

To assure confidentiality, the information you have provided to me will be destroyed. If you would like to receive an electronic copy of the final publication you may send me an email request via [email address].

Sincerely,

Stephen M. Kitoo
Doctoral Candidate

APPENDIX E: Consent Forms

CONSENT FORM FOR RESIDENTIAL FACULTY

CONSENT FORM

Residential Faculty Members' Differential Use of Blackboard Tools: A Case Study
Stephen M. Kitoo
Liberty University
School of Education

You are invited to be in a research study that seeks to examine why residential faculty members select certain Blackboard tools to integrate into their courses more than others. You were selected as a possible participant because you are a residential faculty at Liberty University who uses or has used Blackboard for teaching. Please read this form and ask any questions you may have before agreeing to be in the study.

Stephen M. Kitoo, a doctoral candidate in the School of Education at Liberty University, is conducting this study.

Background Information: The purpose of this study is to examine why residential faculty members select certain Blackboard tools to integrate into their courses more than others.

Procedures: If you agree to be in this study, I would ask you to do the following things:

1. Participate in an audio-recorded semi-structured interview that is scheduled to last for between 45 minutes and one hour.
2. Review information collected for additions and corrections if any (optional, at a later time). This exercise is scheduled to take no more than 30 minutes.

Risks: The risks involved in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

Benefits: Participants should not expect to receive a direct benefit from taking part in this study.

Benefits to society include the possibility that they may increase their knowledge and skills on ways to improve teaching through the use of varied Blackboard tools to benefit students in their learning process.

Compensation: Participants will be compensated with a $20 gift card for participating in all aspects of this study.

Confidentiality: The records of this study will be kept private. In any sort of report, I might publish, I will not include any information that will make it possible to identify a subject.

Research records will be stored securely, and only the researcher will have access to the records.

Participants will be assigned a pseudonym. I will conduct the interviews in a location where others will not easily overhear the conversation.

Data will be stored on a password-locked computer and may be used in future presentations. After three years, all electronic records will be deleted.

Interviews will be recorded and transcribed. Recordings will be stored on a password-locked computer for three years and then erased by deleting it from the computer drive. Only the researcher will have access to these recordings.

Voluntary Nature of the Study: Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

How to Withdraw from the Study: If you choose to withdraw from the study, please contact the researcher at the email address/phone number included in the next paragraph. Should you choose to withdraw, data collected from you will be destroyed immediately and will not be included in this study.

Contacts and Questions: The researcher conducting this study is Stephen Mwendwa Kitoo. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact him at [phone number] or email [email address]. You may also contact the researcher's faculty chair, Dr. Gail Collins at [email address].

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA 24515 or email at irb@liberty.edu.

Please notify the researcher if you would like a copy of this information for your records.

Statement of Consent: I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.

☐ The researcher has my permission to audio-record me as part of my participation in this study.

_____

Signature of Participant Date

_____

Signature of Investigator Date

CONSENT FORM FOR IT ADMINISTRATORS/DESIGNERS AND FACULTY SUPPORT COORDINATORS

CONSENT FORM

Residential Faculty Members' Differential Use of Blackboard Tools: A Case Study

Stephen M. Kitoo
Liberty University
School of Education

You are invited to be in a research study that seeks to examine why residential faculty members select certain Blackboard tools to integrate into their courses more than others. You were selected as a possible participant because you are an information designer or administrator or a faculty support coordinator at Liberty University who has experience working with the Blackboard. Please read this form and ask any questions you may have before agreeing to be in the study.

Stephen M. Kitoo, a doctoral candidate in the School of Education at Liberty University, is conducting this study.

Background Information: The purpose of this study is to examine why residential faculty members select certain Blackboard tools to integrate into their courses more than others.

Procedures: If you agree to be in this study, I would ask you to do the following things:

1. Participate in an audio-recorded semi-structured focus group interview that is scheduled to last for between 45 minutes and one hour.
2. Review information collected for additions and corrections if any (optional, at a later time). This exercise is scheduled to take no more than 30 minutes.

Risks: The risks involved in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

Benefits: Participants should not expect to receive a direct benefit from taking part in this study. However, focus group participants may benefit from the collaborative conversation regarding the differential use of Blackboard in this meeting.

Benefits to society include the possibility that they may increase their knowledge and skills on ways to improve teaching through the use of varied Blackboard tools to benefit students in their learning process.

Compensation: Participants will be compensated with a $20 gift card for participating in all the aspects of this study.

Confidentiality: The records of this study will be kept private. In any sort of report, I might publish, I will not include any information that will make it possible to identify a subject.

I cannot assure participants that other members of the focus group will not share what was discussed with persons outside of the group.

Research records will be stored securely, and only the researcher will have access to the records. Participants will be assigned a pseudonym. I will conduct the interviews in a location where others will not easily overhear the conversation.

Data will be stored on a password-locked computer and may be used in future presentations. After three years, all electronic records will be deleted.

Interviews will be recorded and transcribed. Recordings will be stored on a password-locked computer for three years and then erased. Only the researcher will have access to these recordings.

Voluntary Nature of the Study: Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

How to Withdraw from the Study: If you choose to withdraw from the study, please contact the researcher at the email address/phone number included in the next paragraph. Should you choose to withdraw, data collected from you will be destroyed immediately and will not be included in this study. Focus group data will not be destroyed, but your contributions to the focus group will not be included in the study if you choose to withdraw.

Contacts and Questions: The researcher conducting this study is Stephen Mwendwa Kitoo. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact him at [phone number] or email [email address]. You may also contact the researcher's faculty chair, Dr. Gail Collins at [email address].

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA 24515 or email at irb@liberty.edu.

Please notify the researcher if you would like a copy of this information for your records.

Statement of Consent: I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.

☐ The researcher has my permission to audio-record me as part of my participation in this study.

Signature of Participant	Date
Signature of Investigator	Date

APPENDIX F: Interview Questions

1. How long have you been teaching overall?
2. What discipline or academic program do you teach?
3. What classes do you teach?
4. How long have you been utilizing Blackboard as a teaching tool in your classes?
5. Which of the following Blackboard tools have you utilized in your residential class and how frequently?

Tools	Frequently used	Less utilized	Never used	Not aware it exists in Blackboard
Announcements				
Blackboard Collaborate				
Blogs				
Chat				
Course content				
Discussion board				
Grade Center				
Journals				
SafeAssign				
Wikis				
Other				

6. How has the use of Blackboard impacted your job performance and quality of your work?
7. How would you describe your experience using Blackboard LMS?
8. Which Blackboard tools have you found most useful in your teaching and why?
9. Which Blackboard tools have you found to be least useful in your teaching and why?
10. How have your colleagues influenced you in using different Blackboard tools?
11. What do your colleagues mention as their motivations for using the various Blackboard tools?

12. In what ways has your supervisors or the administration influenced you in using different Blackboard tools?
13. How has the technical support team encouraged or discouraged you to integrate the various Blackboard tools in your classroom?
14. What nature of Blackboard-related-concerns have you raised with the support team and why?
15. In what areas have you been trained with regard to Blackboard use?
16. How have you utilized the training you received towards the use of Blackboard?
17. What role has the university administration and leadership played towards the ongoing Blackboard and other technical training?

APPENDIX G: Focus Group Questions

1. Please introduce yourselves by stating your name, your job title, and your department, and a brief description of your position.
2. How do you identify yourself in terms of gender and age?
3. How long have you been working in your position?
4. What experience, if any, have you in the Blackboard LMS?
5. How does the Blackboard enhance the teaching roles of faculty members?
6. What personal struggles have faculty members expressed regarding integrating various Blackboard tools in their classes?
7. What supports are available for residential faculty members towards using the various Blackboard tools?
8. What is the university policy regarding faculty members' use of various Blackboard tools?
9. What is the content and frequency of the training that faculty members receive towards the use of Blackboard tools?
10. How have faculty members responded to training in using various Blackboard tools?
11. What additional support do faculty members require to encourage their increased utilization of Blackboard tools?

APPENDIX H: Reflexive Journal

Date	Perceptions and Reflections
March25, 2019	Potential biases that I bring to the study include my experience in teaching and my ambition to continue teaching. Since these may impact the way I interact with the data, I will use an external auditor to confirm that none of the biases affected the quality of my data.
November 7, 2019	While I tried to give everyone in the focus group an almost equal chance to speak, it seemed that some spoke more than others. This is expected in a focus group. I am hoping to give everyone another chance to share what they know about this topic when I conduct member checking.
November 9, 2019	Another bias I am noticing while interviewing participants and while going through the transcribed data is that since I have no experience teaching in a residential class in the United States. As such, I acknowledge that I may be missing some aspects of what it takes to prepare and teach a residential class.
December 9, 2019	Since I am an outsider seeking information about the organization, I may not fully decode what is not being said from what is said.

APPENDIX I: Audit Trail

Date	Task Completed
03/09/2019	Sent an email to expert reviewers requesting them to review my interview and focus group questions
03/09/2019	Received comments from one of the expert reviewers
03/11/2019	Received comments from the second expert reviewer
10/15/2019	Received IRB approval to collect data
10/21/2019	Conducted the first individual interview for the pilot study
10/22/2019	Conducted the second individual interview for the pilot study
10/24/2019	Conducted a focus group meeting for the pilot study
10/29/2019	Interviewed the first participant for the study
11/05/2019	Interviewed the second participant for the study
11/07/2019	Conducted focus group meeting for the study
11/12/2019	Interviewed the third and the fourth participant for the study
12/16/2019	Interviewed the fifth participant of the study
01/10/2020	Sent interview transcript to participant one for review
01/11/2020	Sent interview transcript to the second and third participants for review
01/13/2020	Sent interview transcript to the fourth and fifth participants for review. Also sent focus group meeting transcript to all the participants for each to review individually
01/14/2020	Received replies from some focus group participants and also from the third and the fourth interview participants
02/04/2020	Received analytics data and I analyzed it

APPENDIX J: Theme Development Table

Open Codes	Axial codes	Themes
Administration: they communicate required trainings; require use of announcements; required faculty to learn Top Hat; faculty are "irritated" at required ones	Required	Requirements
Announcements: every week; to remind students	Blackboard Benefits • Benefits • Easy • Issues	Blackboard • Benefits • Easy • Issues • Usefulness • Efficiency
Blackboard: accessibility; Ease of communication; for storage; no issues; it keeps everything together; exams difficult to copy; issues with quizzes; stable for the most part; tools residentially are supplementary; technology depersonalizes; minimal use residentially		
Grade center: posting grades; every week; check pending assignments	Blackboard • efficiency • usefulness	
Efficiency: Save time; grade more quickly	Blackboard • efficiency	
Usefulness: Market the need; show value; depends on class; depends on need	Blackboard • usefulness	
Blogs: Students liked it; used Blackboard to archive; a lot of work to manage	Usefulness	
Discussion board: we do our discussion in class; relevant for online	Usefulness	
Boot camp: held couple times in a year; voluntary; poorly attended	Training	Technical team Available support
CTE – guide in use of tools; they can send tutorial; can walk to them; They're really good; merged with CAD	Technical team; Training	
Drop in support for Blackboard	Technical support	
Helpdesk: available; fix glitches;	Technical team Available support	
Technical team: Helpdesk are available; they fix glitches; "very helpful"; timely response	Technical team	
Training: for new faculty; some faculty no show; required for two days at the beginning of school year; every semester; saves faculty time; it is helpful	Training	
Training materials: videos; tutorials; available	Support	
Faculty: are busy; are overloaded; they are good at what they do	Time	Time

	• busy	
Time: "we are all pressed for time;" "my plate is full"	Time	
Fear: of technology; of wrecking the system; feeling students are more knowledgeable; fear that students will notice inabilities	Fear	Fear
GSA: More time to tinker; faculty members rely on GSAs; knowledgeable on use of tools; manage Blackboard on behalf of faculty	Others	Social support
Peers: Blackboard doesn't feature in conversations; ask others for help; colleagues share what they learned in training	Social	
Motivation: incentives, student surveys, $500, food, a raise, portfolio; to know what is new; I want to make learning more fun; to keep up with technology; it is required	Intrinsic motivation; Extrinsic motivation	Motivation