HIGHER EDUCATION: FACULTY AND THE DEVELOPMENT OF ONLINE COURSES

A Thesis

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by

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HIGHER EDUCATION: FACULTY AND THE DEVELOPMENT OF ONLINE COURSES

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Graduate and Professional Studies in Education
Abstract of HIGHER EDUCATION: FACULTY AND THE DEVELOPMENT OF ONLINE COURSES by Horacio Viveros Jr.

Brief Literature Review

Online education has been a popular topic at public higher education institutions within the last decade, but its adoption at public higher education institutions has been a challenge. Many teachers view the adoption of new technologies as taking a risk with the way education is delivered, and it can often be an intimidating change (Guri-Rosenblit, 2009). The work and roles of faculty within higher education institutions implementing online education have been reshaped and redefined due to the integration of technology into the academic workplace (Tabata & Johnsrud, 2008). The development of online courses requires high levels of commitment by faculty, which can cause faculty to be reluctant (Hayes & Jamrozik, 2001). For online education to be successful, faculty are a critical and core resource to the success of any distance education initiative. It is extremely important for education leaders to understand the roles of faculty are changing with the incorporation on online learning.
Statement of the Problem

Currently, there is an effort by higher education leaders, administrators, and politicians to increase student access and retention by incorporating the use of online education. As technology becomes a larger part of our daily lives, so will the impact it has on higher education. Online programs are becoming popular and are slowly moving away from the traditional model of teaching. Thus, this study examined the technological knowledge and skills of full-time faculty and the effectiveness of developing the curriculum for online courses.

Methodology

The study represented a quantitative research design by the use of an electronic questionnaire conducted through SurveyMonkey.com, an Internet-based survey tool. The data were collected through an online questionnaire sent to full-time faculty at the College of Education. A letter of consent including a link to the survey was emailed to 128 full-time faculty members. The sample for this study included 14 full-time faculty members at the College of Education.

Conclusions and Recommendations

Findings of this research included whether full-time faculty in the College of Education at a 4-year public institution possessed the technical knowledge and skills to develop online courses and identify if online instruction was appropriate for graduate programs. The researcher identified that a majority of the participants had the technological platform needed to teach online courses; however, participants identified
challenges with the development of online curriculum and only a small percentage felt they had the skills needed to develop online courses. The recommendation is to expand the research with other departments and universities since this research was only conducted with one particular department and university. Finally, further research should study how the development of online courses impacts student success.

________________________, Committee Chair
José Chávez, Ed.D.

________________________
Date
DEDICATION

I would like to dedicate my thesis to my parents, Horacio Viveros and Beatriz Viveros, for making me the person I am today.
ACKNOWLEDGMENTS

First and foremost, I would like to thank God for providing me the strength and dedication to complete this thesis. This also could have not have been completed without the support and motivation of loved ones around me, and for that I extend my greatest gratitude.

To my fiancé, Gicel: I want to thank you for believing in me and providing me with the support that motivated me to move forward. You are my inspiration to be a success.

To my parents: You have both provided me with the guidance to make the right decisions in life and not to give up. You are my inspiration to never lose focus because I always knew you just wanted the best for me.

To my sisters: For giving me words of encouragement, believing in me, and always being understanding about my commitments—know I will always be there for you, my nieces, and my nephew.

To my classmate, Fraternity brothers, and home town friends: Celedonio you have been a great inspiration, and thank you for keeping me accountable to finish my work. Nu Alpha Kappa Fraternity brothers at Sacramento State University, you have been a key component of all my educational accomplishments. To my friends from back home, thank you for being there for me through the good times and rough times and for always being friends I can count on.
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Chapter 1

INTRODUCTION

Background

American higher education has been a challenge of affordability and access for students at public education institutions. In recent years, the price for students’ tuition has increased dramatically, yet the quality of education has declined. “For the past 30 years, from 1982-83 to 2012-13, in-state student tuition at public four-year institutions increased by 257%, from $2,423 to $8,655” (Bowen, 2013, p. 19). “Due to state budget deficits, lawmakers have withdrawn billions of dollars in public funding and tenure-track jobs have become increasingly scarce” (Wildavsky, Kelly, & Carey, 2011, p. 1). At the same time, public officials and education leaders are looking to increase the number of people earning college degrees.

Technology plays a big role in our day-to-day lives and has been a key innovator in the ways we communicate, such as the use of cellular phones, electronic mail, and the Internet. The Internet’s easy accessibility allows people around the world to connect within seconds and can be fairly easy to use once time is taken to learn how to use it. The use of technology will transform the way education is delivered at our institutions by changing the traditional face-to-face model of teaching and instead delivering courses through the use of technology, via the Internet. It is important to ensure such technology has sound infrastructure and is correctly implemented.
For-profit higher education institutions have been innovators in providing access to students by incorporating the use of technology in their courses. The use of technology at these institutions has provided access allowing a large percentage of college students to enroll. On the other hand, public institutions need to implement technology to provide greater access to students but have been adapting to the use of technology at a slower pace. The adoption of online education is coming to institutions in California and policymakers are playing key roles in developing legislation for use of technology. In June 2013, California state senators unanimously passed a controversial online education bill that creates a grant for faculty at the state’s higher education institutions to develop online courses for the 20 most impacted lower division courses (Yoder, 2013). With higher education leaders seeking ways to provide access and adapt to a new age of learners, the use of online education can be a tool to reach that goal. Institutions incorporating online education will transform the way education is delivered, setting a historical moment at public institutions.

**Statement of the Problem**

Currently, there is an effort by administrators and politicians to increase student access and retention by incorporating the use of online education. As technology becomes a larger part of our daily lives, so will its impact on higher education. Online programs have become popular, and institutions of higher education are slowly moving away from the traditional model of teaching. Thus, this study examined the technological
knowledge and skills of full-time faculty and the effectiveness of developing the curriculum for online courses. The following specific questions were addressed through this research:

1. Do faculty members within the College of Education at a public 4-year higher education institution in California possess the technical knowledge and skills to develop online courses?

2. How does faculty’s knowledge of the use of technology impact course development of online instruction/teaching?

3. Is online instruction appropriate for graduate programs?

**Significance of the Study**

Currently, the number of massive open online courses is increasing throughout the nation to provide students access to higher education. Public universities have taken action in implementing online learning. Research suggests that faculty at state universities have grown accustomed to the traditional face-to-face model of teaching. According to Ocak (2011), a large number of faculty have reservations about adopting technology for online teaching; such reservations include the change in roles, engaging students with innovative technologies, and handling technical issues. On the other hand, newer age faculty are adapting well to technology in order to adapt to the students who are underserved. Online learning has encouraged faculty to adjust to changes in the way they teach to keep up with the challenges encountered in higher education. For faculty to
adapt to those changes, it is important to ensure faculty are able to deliver online courses and provide the support necessary to be successful. The three expected outcomes of this research were to identify whether faculty possessed the technical knowledge and skills to develop online courses, how faculty’s knowledge and skills in the use of technology impacted the development of online curriculum, and to identify whether online instruction is appropriate for graduate students.

**Definition of Terms**

This study of online education at the university level introduced a variety of terms. It is necessary to understand the definitions of these terms. The definition of each term is provided below and assists with understanding how each term relates to the topic of educational technology.

**Access**

The opportunity and knowledge to enroll in postsecondary education.

**Distance Education**

Refers to learning or courses offered from a distance. It may include offering courses through the Internet, video, and any other forms outside the classroom (Hernandez, 2012).

**Traditional Course**

Courses delivered face-to-face between instructors and students. The content is typically delivered in writing or orally (Allen & Seaman, 2008).
Online Course

A course where most or all of the content is delivered online. Typically, there are no requirements for face-to-face meetings between students and the instructor, either in the classroom or via video during the course (Allen & Seaman, 2008).

Online Learning

Education in which instruction and content are delivered primarily over the Internet.

Hybrid/Blended Learning

In these courses, the instructor combines elements of online distance-learning courses and face-to-face delivery. A substantial proportion of the content (30-79%) is delivered online, usually through online discussions, and typically has a reduced number of face-to-face meetings (Allen & Seaman, 2008).

Tenure-Track Faculty

A professor’s permanent job contract, granted after a probationary period of 6 or 7 years.

Massive Open Online Courses (MOOCs)

Refers to a web-based class designed to support a large number of participants. The initial MOOCs were network-based courses designed so that a learning environment could develop from the participants’ interactions.
Open Courseware (OCW)

A subcomponent of the broader open educational resources (OER) movement, with open educational resources defined as “digitized materials offered openly and freely to educators, students, and self-learners to use and reuse for teaching, learning, and research (Rhoads, Berdan, & Toven-Lindsey, 2013).

Nontraditional Student

Students identified as any combination of the following: part-time student, adult learners, returning/re-entry, commuter, veteran, individuals working full time, or students who have dependents.

Organization of the Remainder of the Thesis

This study looked at the technological knowledge and skills of faculty and the development of online courses. It also investigated whether online instruction is appropriate for graduate students. Chapter 2 focuses on the literature related to the research questions to ensure a thorough understanding of the topic. Chapter 3 introduces the methodology used to conduct the research and includes an explanation of the setting of the study, the population and sample, and the research design. The data analysis and findings are presented in Chapter 4, with subtopics organized by the themes related to the research questions. Finally, Chapter 5 includes a summary of the themes, conclusions, and recommendations found according to the research.
Chapter 2
REVIEW OF THE LITERATURE

Introduction

Public higher education institutions have been experiencing the rise of tuition and the decline of government support, and the increase of competition of higher education institutions has made it challenging to provide a good quality education. College and university leaders are struggling to understand where these changes will lead and how they can make higher education more affordable, more accessible, and of greater quality for increasingly diverse aspiring students (Best & Bush, 2013). Public higher education institutions are the most impacted, requiring them to find alternative means of access to higher education, such as implementing the use of online education. The online trend has been increasing throughout the years due to the convenience it allows in acquiring their degrees. Fewer than 7,000 students were pursuing degrees via fully online instruction by 1995, earning their degrees exclusively through online learning without taking any courses in the traditional classroom. By 2008, that number had soared to 1.8 million (Wildavsky et al., 2011). However, access to higher education has not been keeping up with the demand, and many state public colleges and universities have not been operating at full capacity because of large budget cuts.

Public institutions play an important role in our nation’s higher education systems by providing access to historically underrepresented students. In the United States alone,
there are over 4,000 public and private postsecondary institutions that enroll about 25 million students (Wildavsky et al., 2011). According to Douglass (2010), “The dire situation for U.S. higher education is the most acute in the state of California, presenting an exaggerated yet common narrative” (p. 9). Despite being a large portion of higher education, the public education system has turned away many students from enrollment. One of the causes is that the Cal Grant has been frozen for students attending California’s 4-year colleges (Rivard, 2014). In a 2010 study, Douglass stated that the University of California (UC) system refused entrance to its campuses to about 2,300 eligible freshmen, while the California State University (CSU) system turned away about 20,000 students in the fall semester of 2010.

Due to issues surrounding access and retention, administrators and policymakers have adopted the use of technology to assist institutions in managing the growing population of students pursuing higher education. The implementation of online learning is a trending topic of discussion within higher education as a way to provide access to more students by allowing for flexibility of class sizes, class availability, and attracting students to enroll. For many students, the ease of accessibility is most attractive and often leads to students enrolling in classes. During the past decade, the number of students enrolled in online courses has risen at a significant rate, making it a growing trend for students, administrators, and some faculty (Jenkins, 2013). Even though online learning is a growing trend, research is very limited on the effectiveness of the use of online learning. According to Lytle (2011), the growth of online classes began to level
off in the fall of 2010, when about 31% of all postsecondary students were taking at least one online class. The slower rate of growth in the number of students taking at least one online course as compared to previous years may be the first sign that the upward rise in online enrollments is approaching a plateau (Allen & Seaman, 2011). The development of online curriculum is not an easy format to adapt since it requires faculty to possess technical knowledge and skills in planning, developing, and implementing online courses.

Despite access to a small percentage of research concerning distance education, there are some other key issues to consider regarding online learning. The emerging issues of quality assurance have been identified as a lack of consensus about basic terminology, such as the use of the terms distance education, distributed learning, and technology-enhanced learning (Van Dusen, 2000). As a result of online education expansion, not only are the norms of education changing for students, so are the roles of faculty. The changing definition of faculty roles and responsibilities requires uniform standards while maintaining diversity among institutions (Van Dusen, 2000). Such changes require faculty to think outside the box and develop curriculum to adapt to student needs. Faculty work and roles within the academy have been reshaped and redefined by the integration of technology into the academic workplace (Tabata & Johnsrud, 2008). With continued use of technology, scholars and education leaders will need to remain current and familiar with the research and knowledge necessary to implement the use of new technology.
Academic scholars and classroom practitioners vary considerably in their attitudes and in their uses of communications and instructional technologies. Davis (as cited in Buchanan, Sainter, & Sauders, 2013) stated, “There are two key variables that influence intention to make the use of technology: its perceived usefulness and its perceived ease of use” (p. 2). Faculty with higher self-efficacy and special skills in technology may perceive online courses as easier to use. To increase the perceived use of technology, it is recommended that institutions should train academic faculty by raising Internet self-efficacy and increase technical skills in instructional and curriculum development for online courses. At a majority of higher education institutions, the use of technology is used by faculty and students through mediums such as electronic mail and providing electronic formats of curriculum. For many faculty and students, technology is heavily relied upon for daily use. However, some faculty using assorted technologies to facilitate their work still resist using technologies in delivering distance education (Tabata & Johnsrud, 2008). Such resistance may be due to a limited vision of the future, being comfortable with the way things are, or not having the skills to perform the tasks they are asked to do (Moerschell, 2009).

There is a group of scholars who view the use of new digital technologies as a representation of additional tools with which to enhance existing practices, such as augmenting lectures and presentations, exploring supplementary sources of information and data, and increasing the venues for communication and interaction (Van Dusen, 2000). As the use of technology is implemented to facilitate the learning process, most
traditional institutions of higher education are analyzing their institutional and student needs to determine the best way to enter the millennium of technological literacy (Cantor, 2000).

**Historical Aspect Related to Technology**

The environment in which higher education instruction takes place has changed dramatically in the last two decades. In the past, traditional instruction took place in classrooms where the professor lectured and the students took notes, researched topics in libraries, and collaborated in small groups (Leidman & Piwinsky, 2009). Many educational institutions have begun offering courses via the web in a variety of forms. Web 2.0, a term coined by O’Reilly (as cited in Wilen-Daugenti, 2009), describes the latest advances in collaborative Internet technologies. With Web 2.0, users participate in creating knowledge and sharing expertise rather than acting as passive recipients, making the Web an environment for sharing, collaborating, and exchanging thoughts and ideas (Wilen-Daugenti, 2009). Blogs, wikis, and Really Simple Syndication (RSS) feeds have quickly been adopted in classroom environments (Wilen-Daugenti, 2009). Such new technologies have provided other avenues to share information and have educated discussions via the Internet. Recently, a new breed of online classes has emerged, known as Massive Open Online Courses (MOOCs). MOOCs are online classes that anyone, anywhere, can participate in and are usually free (Hoy & Bringhm, 2014). It was assumed that the new technologies would transform teaching and learning processes from being highly teacher dominated to student centered. Such a transformation would have
resulted in increased learning gains for students, creating and allowing for opportunities for learners to develop their creativity, problem-solving abilities, information reasoning skills, communication skills, and other higher order thinking skills (Guri-Rosenblit, 2009).

**Massive Open Online Courses (MOOCs)**

MOOCs are online courses with several features of accessibility to online education. The content is delivered online, either through video, slideshows, discussion boards, or any of those combinations (Liyanagunawardena, Adams, & Williams, 2013). The courses are typically developed by well-known academic researchers in respected fields, but the reality is that anyone can create a MOOC (Kolowich, 2013b). With the MOOCs, students do not need to attend traditional style classrooms; instead, students watch prerecorded lecture videos followed by quizzes to test what the students learned (Hoy & Bringhm, 2014). Quizzes are also required to ensure the students do not zone out, and the quizzes are followed up with immediate feedback.

Advantages of the MOOCs are the openness and user friendliness of the format, which makes educational resources available to anyone who wants to learn (Hoy & Bringhm, 2014). Even though the MOOCs can teach to thousands of students at a time, the reality is that very few students who register for a MOOC complete the course (Kolowich, 2013b). The majority of the MOOCs have a completion rate of less than 10% (Liyanagunawardena et al., 2013). Due to the lack of research on the MOOC’s questions, the reason why the completion rate is so low is unknown.
**Legislation**

Due to the increased demand for a postsecondary education, business entrepreneurs have invested in the growing business of higher education. The lack of job availability and the request for work experience with a postsecondary education has increased the demand of people pursuing a degree. Nontraditional students have restrictions traditional students do not have. For example, transfer students have different needs and priorities that can conflict with pursuing a postsecondary education, such as access and monetary challenges. New for-profit institutions have emerged that are tailored to shifting student demands (Wildavsky et al., 2011). California has made the case that open-source and network-based education can transform California’s massive public education system while reducing costs in the cash-strapped state (Booker, 2013).

In the beginning of 2013, higher education representatives and online education providers held an all-day conference at the University of California, Los Angeles (UCLA), to discuss the impact of MOOCs and other forms of online, computer-mediated instruction on higher education in California (Booker, 2013). The conference, “‘Rebooting Higher Education: Leveraging Innovations in Online Education to Improve Cost Effectiveness and Increase Quality,’ was sponsored by the 20 Million Minds Foundation, a nonprofit organization dedicated to lowering the cost of higher education” (Booker, 2013, para. 2). The event brought together vendors of online instruction like Coursera and Udacity (platforms using the MOOCs), California policymakers, secondary education faculty, and students (Lawrence, 2013). There is an urgency for California
higher education leaders to make the implementation of online learning a priority, yet most faculty have been skeptical about the use of online learning due to limited research on the subject.

Within the last couple years, California politicians have been more aggressive about bringing technology into the classrooms via open-source and network-based educational approaches (Lawrence, 2013). In 2012, California State Governor Jerry Brown signed two bills that would give students free digital access to 50 core textbooks for lower division courses offered by the University of California, California State University, and California Community College systems (McGreevy, 2012). Senate Bill 1052 (SB 1052) provides for the development of digital textbooks and creates the California Open Education Resources Council, which is made up of faculty members who would develop the list of targeted courses and create and oversee the approval process (McGreevy, 2012). SB 1052 would create the California Digital Open Source Library to offer the digital textbooks to students (Seafong, 2012). It is suggested that these two policies would benefit students because physical textbooks are expensive and heavy. Students will no longer have to worry about forgetting a book or carrying heavy textbooks around campus, hence providing a more convenient option.

In March 2013, Senate Bill 520 (SB 520) was introduced by Senate President Pro Tem Darrell Steinberg; the bill introduced an incentive grant program that would allow faculty at state public colleges and universities to develop courses with private online providers such as Coursera and Udacity (Yoder, 2013). Due to the lack of research and
credibility, the bill died on the floor. Steinberg is no longer trying to advance the measure and will not do so until at least August 2014 (Rivard, 2013). Rhys Williams, the senator’s spokesman, said Steinberg is waiting to see the results of new online efforts by the state’s three public higher education systems: the California Community Colleges, California State University, and the University of California (Rivard, 2013). Higher education faculty leaders have expressed concern about rushing to adopt the MOOCs without carefully researching its impact on the students.

San Jose State University, one of the first California State Universities established, was the first to offer online courses using the MOOC platform. After two semesters of experimentation, the university decided to put the program on hold to determine whether Udacity was appropriate to deliver online courses due to low completion rates compared to traditional classes (Kolowich, 2013a). The public college systems are working to expand their online offerings internally without outsourcing their students to education technology startups with little to no track record offering for-credit courses (Rivard, 2013). Steinberg is willing to see how they develop and assess whether they are effective before making a decision on whether SB 520 remains necessary (Rivard, 2013).

The immediate death of SB 520 was another setback to a wave of private companies hoping to play in the public higher education market (Rivard, 2013). At the UCLA conference, some self-described true believers in MOOCs expressed concerns about larger public policy implications of online instruction (Booker, 2013). Executive
Vice Provost and Dean of Arizona State University Online and Extended Campus at Arizona State University Phillip Regier (as cited in Booker, 2013) said, “We have to be very careful about what education is, what an educated individual is in this country” (para. 10). Reform of California’s higher education is coming soon, but when is the appropriate time to implement such changes? Providing the appropriate approach and faculty participation is an important factor in making distance education successful.

Population

Due to the increase of postsecondary institutions offering distance education opportunities, there has been an increase in other institutions supporting the use of online technology to compete for students (Duderstadt, as cited in Tabata & Johnsrud, 2008). Academic leaders at the private for-profit and private nonprofit institutions have the most favorable perception of their faculty’s acceptance of online courses, while those at the public nonprofits have lower rates. Less than 4% of the leaders at private for-profit institutions report that their faculty does not accept the value and legitimacy of online education, a rate that compares to 18% for the leaders at private nonprofit institutions (Allen & Seaman, 2011). Even though faculty participation with the use of online education varies in perception, faculty levels of curiosity and interest were high (Hayes & Jamrozik, 2001). In this day and age, faculty members are encountering challenges inside the classroom due to lack of resources and adapting to changes in society; however, considering other ways to teach comes with a change in work roles (Tabata & Johnsrud, 2008). Due to the high level of commitment required for producing online
course content and delivering the courses, faculty are reluctant to adapt to such changes (Hayes & Jamrozik, 2001). Faculty are reluctant due to the amount of time it takes to learn the technology that will be used, to develop the curriculum, to adapt the curriculum for use online, and the lack of release time to make sure the online curriculum is correctly implemented (Tabata & Johnsrud, 2008). With the appropriate approach—providing incentives and support from higher education leaders—faculty may be open to the adoption of online learning with their curriculum and at their institution (Georgina & Olson, 2008).

To ensure the quality of online instruction and learning, the success of distance education relies heavily on faculty acceptance and engagement (Johnson, Wisniewski, Kuhlemeyer, Isaacs, & Krzykowski, 2012). Faculty members are a critical and core resource to the success of any distance education initiative. Facilitating understanding of university educators and policymakers regarding the conditions that encourage or discourage faculty participation may assist in sustaining academic quality and integrity (Tabata & Johnsrud, 2008). It is extremely important for education leaders to understand how the roles of faculty are changing with the incorporation of online learning. For many faculty members, there is no incentive to changing the roles of their work or reasons to add more work.

Faculty union officials in California worry professors who agree to teach free online classes could undermine faculty intellectual property rights and collective bargaining agreements (Rivard, 2013). With the adoption of the MOOCs and
incorporation of distance education, institutions will be providing curriculum to a larger population. For unionized institutions, researchers suggest union leaders must be involved in the issue of technological uses on campus by assessing costs and benefits; providing access to and training for new technologies; controlling the workload, compensation, and staff levels; and protecting intellectual property rights on the Internet (Vogel, 1996). Private for-profit institutions are able to implement such changes to adapt to the student needs and do not encounter pushback from faculty due to collective bargaining agreements. Educational leaders and politicians should understand how to correctly implement online learning by using best practices to avoid complications for faculty and student success.

**Hybrid Courses**

The creation and utilization of blended courses is perhaps the most successful approach to integrating technology into pedagogy (Georgina & Olson, 2008). Blended learning is a hybrid of traditional face-to-face and online learning in which instruction occurs both in the classroom and online, and the online component becomes a natural extension of traditional classroom learning (Rovai, 2003). It has become a model of online learning that takes advantage of the Internet while incorporating faculty to student face-to-face interaction. Hybrid courses allow for the strengths of each system to make up for the weaknesses of the other. Although it is still a newer use of format, as faculty gain experience with the hybrid course, they will be better able to discern what the proper combination looks like for them (Brunner, 2006).
Moller, Forshay, and Huett (as cited in Hernandez, 2012) mentioned there is a
growth in populations of nontraditional students accessing postsecondary level education. Ho, Lu, and Thurmaier (2006) mentioned that blended learning has become increasingly popular at the graduate level because of the flexibility of scheduling and the ability to meet the needs of a greater number of students. According to Hernandez (2012), distance education programs can serve both remote and local learners, providing access to these new populations of nontraditional students. For nontraditional students, the flexibility of a hybrid education allows working professionals and stay-at-home parents to receive the benefits of face-to-face instruction but maintain the time flexibility for their full-time careers or household responsibilities (Hernandez, 2012).

Even though there are advantages to blended learning, faculty could encounter potential challenges. The initial commitment in preparing a blended course would be time consuming due to the fact that many courses would need to be redesigned. Educators have struggled to adapt to the new roles of blended learning because they face the challenge of integrating technology into their teaching (Ocak, 2011). Ocak (2011) stated that there has been little research on faculty members’ perceptions of online assignments, their technological competences, or their development of course materials for the blended courses. In attempting to keep up with the latest technology, there is a concern that faculty members might spend more time learning the new technologies than focusing on student learning, which could lead to faculty resistance toward teaching blended courses.
Online Teaching

The expansion of the use of technology has also been implemented to assist scholars by offering additional courses. Currently, a variety of platforms are being used to teach online and accommodate students’ needs, particularly the nontraditional students. Key factors of online methods have been the use of course management platforms such as Blackboard, WebCT, and eCollege, along with emerging open source solutions (Abel, 2005). Students want from their colleges much the same things they want from their banks: an ATM on every corner, no lines to wait in, and 24-hour access to their money (Cantor, 2000). The convenient use of technology, catering to the nontraditional student, and open access to higher education are the reasons why for-profit institutions and now public institutions have been increasing their online sources.

“A professional association of distance educators and administrators reported that by 2008 more than 4.6 million students were enrolled in at least one online course, a figure that amounts to 25% of the total higher education student head count” (Wildavsky et al., 2011, p. 202). Despite the accessibility for students, the professors’ general attitudes toward online courses remains unfavorable—even among those who teach online: “70 percent of all faculty members believe the learning outcomes of online courses to be either inferior or somewhat inferior, compared with face-to-face instruction” (Jenkins, 2013, para. 11). The following are the platforms and formats currently used at postsecondary institutions.
Online Curriculum

According to Abel (2005), the most significant finding was institutions that focused on putting full programs online were about four times as likely to perceive that they had achieved overwhelming success as institutions that focused their efforts at the individual course level. Putting a full program online, implemented correctly and focused on student learning, involves teamwork within the academic department and among several units of the institution. For the online program to succeed, it must be carefully thought through and perhaps reengineered to serve students differently (Abel, 2005). Hernandez (2012) stated that educators face challenges in pedagogical issues pertaining to student interactions, design of course content, delivery of curriculum, and differing levels of communication. To use distance education effectively, faculty need to learn new teaching styles and develop new skills to effectively reach the distant learner (Rockwell, Schauer, Fritz, & Marx, 1999). The faculty is in charge of developing new courses for distance education formats, new methods for controlling the learning process, and collaboration and concerns of intellectual property rights (Hernandez, 2012).

Online Instruction

Faculty roles are changing from lecturing to being primarily “designers of learning methods and environments” (Barr & Tagg, 1995, “Nature of Roles,” para. 2). When taking on the commitment of teaching online learning, you are asking faculty to make big changes from their norm of teaching. According to Abel (2005), a quality online learning experience still has much more to do with the faculty member taking the
course than anything else. Abel conducted a study with the Alliance for Higher Education Competitiveness that highlighted how an institution can support the faculty involved in online endeavors. The study elicited the following best practices:

- Nurture grass-roots faculty ideas. Make sure they are at the center as programs move online, and ensure that all faculty who want to venture online have the support services they need.

- Provide frequent and clear communication on why the move to online is important to the institutional mission.

- Provide faculty with support in online technology and pedagogy so that they can focus on using the tools to enhance their interactivity with students.

- Provide one-on-one instructional-design consultations along with staff-development classes that require faculty to experience online courses.

- Recognize the scholarship of teaching and the improved quality it promotes. (Abel, 2005, “Faculty Support,” para. 2)

Distance learning needs to include the whole community to be a success. Understanding of the challenges that can be encountered and using best practices would ease the use of online learning. Faculty, being the key players, should have the appropriate resources, knowledge, and skills to apply technology correctly and efficiently.
Online Technology Competency

Most adults are less familiar with high-tech environments requiring some skill level with computers and challenge educators to rethink their instructional approaches (Eastmond, 1998). Competency involves a related set of knowledge, skills, and attitudes and is typically divided into specific indicators describing the level of competency (Spector & de la Teja, 2001). Shackelford, Brown, and Warner (2004) indicated that a technologically literate individual should be able to use, manage, and understand technological concepts and systems. They should also have the capacity to design, develop, control, use, and assess technological systems and processes (Shackelford et al., 2004). The development of competencies for online teaching should lead to the associated development of training for online teachers and can also take into consideration the certification of online teachers (Spector & de la Teja, 2001).

Technology has clearly impacted nearly every aspect of communication and pedagogy, and students expect professors to be digitally savvy (Leidman & Piwinsky, 2009), but that is not always the case for many faculty members. Tabata and Johnsrud (2008) found that faculty willingness to participate in distance education was related to their perception of being provided with the adequate training. One approach may be for institutions to provide training, workshops, and general institutional support to encourage faculty to participate with online education (Tabata & Johnsrud, 2008). According to Fink (2003), “Faculty knowledge about course design is the most significant bottleneck to better teaching and learning in higher education” (pp. 23-24).
Online Student Success

A study conducted on online courses by Hara and Kling (2001) found that feelings of isolation were not the main stress inducer in students taking a distance education course as many other studies have noted. Instead, “students reported confusion and anxiety, and frustration due to the perceived lack of prompt or clear feedback from the instructor, and confusing instructions on the course Website and in e-mail messages from the instructor” (Hara & Kling, 2001, p. 68). Faculty plays a big role in the success of online learning, but the students should also have certain characteristics to succeed in such courses. According to Hong and Jung (2010), successful distance learners can have different characteristics such as high motivation, positive attitude, strong will to achieve, clarity in learning goals, and a high expectation of success.

The question is whether online learning is a benefit to the students and society. Because online learning is a fairly recent development, it is difficult to tell the impact of online learning. A recent survey with the Chronicle of Higher of Education found that 72% of faculty members who teach MOOCs do not believe their students should receive college credit (Jenkins, 2013). In other words, even supporters of MOOCs do not think they are as good as face-to-face instruction (Jenkins, 2013). Despite the implementation of online courses, faculty members who had experiences with online teaching did not all have positive outcomes.

Undergraduate students should be adequately trained with critical thinking skills to interact in today’s world. The interaction between learning and the content is a
traditional hallmark of an undergraduate education, which gives the opportunity to develop critical thinking skills (Van Dusen, 2000). A majority of today’s available jobs require the use of technology, along with good critical thinking and leadership skills. Considering today’s competitive job market, would students who receive an online degree be able to compete with those who instead received face-to-face instruction? Many institutions are unclear about how this new technology fits with their mission. They have also found it challenging to achieve faculty use that truly enhances the learning interaction between faculty and students as opposed to simply posting materials online (Abel, 2005).

Challenges Associated with Change

Impact

Adoption of the new technologies is perceived by many teachers as a risky, if not an intimidating, change (Guri-Rosenblit, 2009). The combination of technology use and competencies may serve to shape faculty attitudes about distance education and their inclination to participate (Tabata & Johnsrud, 2008). Most academics welcome change in society but hate any change in their immediate environments (Wilen-Daugenti, 2009). Teaching online, or even preparing some materials for online teaching, requires faculty to devote much more time to the preparation of study materials than they would for face-to-face classroom presentations (Guri-Rosenblit, 2009). Many faculty members are frustrated by the lack of technical support and the burden sometimes associated with
using technology, but students can become bored by the lack of technology use in the classroom (Wilen-Daugenti, 2009). Additional frustration comes from a lack of technological infrastructure, such as slow Internet connections, inadequate hardware and software, and low levels of technical expertise among instructors (Johnson et al., 2012). Even the use of the most simple email function can sometimes be threatening for many academics (Guri-Rosenblit, 2009).

Guri-Rosenblit (2009) found that the overload put on professors who exclusively teach online courses results in a higher burnout rate compared to professors who do not teach online. Becoming an effective distance instructor requires training to acquire the skills and competencies unique to online and other distance environments (Spector & de la Teja, 2001). In the context of distance education, institutions and accreditors should determine whether faculty members are competent to teach in the online environment, for example, through a certification process (Spector & de la Teja, 2001).

**Cost of Online Instruction**

The incorporation of online education is a method used to provide educational access to students at a lower cost and save the institution money or work with the low amount of resources available. The use of technology in education is seen as a promising way of controlling costs while reducing achievement gaps and improving access (Bowen, Chingos, Lack, & Nygren, 2013). It is important to consider the implementation and integration of new technology in education; if not focused on cost, it can be very expensive for the institution (Hjeltnes & Hansson, 2005). The initial cost of production,
establishing a platform of support for instructors, and maintenance are all required. The initial cost in the establishment in technological infrastructures does not guarantee a return in investment.

**Equipment for Online Instruction**

The ease of access and availability of technology allows for the opportunity to become more familiar with technology, the technology which plays an integral part of people’s daily lives (Spotts, 1999). The Internet is the primary component for an online education, along with computers and portable devices (Eastmond, 1998). There has been an urgent need to equip schools and homes with computers and access to the Internet, and the number of Internet locations is increasing while the cost of equipment is decreasing (Metz, 2010).

The growing familiarity with portable communication devices and the use of email has changed the way people communicate. Such modes of communication have the ability to connect faculty and students 24 hours per day, seven days per week (Leidman & Piwinsky, 2009). While the use of cell phones is a convenient and readily accessible form of communication, faculty members limit access by restricting distribution of their personal contact number. Leidman and Piwinsky (2009) mentioned that the easy access to cell phones can conflict with the privacy and time needed by faculty for other academic work or personal time. Leidman and Piwinsky (2009) also noted faculty attempt to respond quickly to student emails, which gives faculty more
control over the time of interaction while maintaining high levels of interaction when compared to the use of cell phones.

**Generational Difference**

The world of information technology is fast paced and constantly changing, requiring adaptation to the use of technology in our daily lives; on the other hand, the culture of higher education is slower paced regarding change and the adoption of technology (Beverage, 2003). Technology has assisted in many of the challenges encountered in today’s economy, connecting people at the tips of their hands. Implementing the use of technology requires the need for change and adaptation. The education sector has been looking at implementing the use of technology to assist in challenges encountered at educational institutions, requiring the need for change. People’s ages and experiences are inversely related to technology anxiety; the older and more experienced instructors tend to have higher levels of technology anxiety (Johnson et al., 2012).

Today’s workplace is challenged by working with a variety of generations of employees who each have their own values, expectations, and attitudes (Kyles, 2005). A generation is a group of people born during a certain period of time, with each generation sharing common experiences (Monk et al., n.d.). According to Kyles (2005), there are four generations: Matures, Baby Boomers, Generation Xers, and Millennials.

Matures are the oldest group and were born prior to 1945; they are typically loyal, consistent, and conforming (Dziuban, Moskal, & Hartman, 2005; Monk et al., n.d). Baby
Boomers were born between 1940 and 1960, approximately, and typically value hard work and competition (Monk et al., n.d.). Generation Xers were born between 1960 and 1980 and was the first generation to be technologically literate and are typically individualistic (Kyles, 2005). Finally, Millennials were born between 1980 and 2000; they are typically technologically literate, purposed, and multitasking (Monk et al., n.d.).

According to Rosario (2012), Baby Boomers’ attitudes toward technology—including computers and the Internet—are typically negative, stating that new technologies will have a negative impact on productivity and business. Baby Boomers did not grow up in a digital age and use less technology than other generations. Millennials entering the workplace typically adapt easily to change and encourage the use of technology, which can lead to the gap between generations causing tension between employees from different generations (Howe & Nadler, 2012). Younger employees in the education sector, categorized as Millennials, are geared toward the use of technology; but it is the Baby Boomer generation leading the institutions who hold the decision making power regarding the use of technology development, technology adoption, and resource allocation to support such efforts (Rosario, 2012). Millennials entering the workplace might expect the use of technology at the workplace to already be implemented, but not many institutions are up to speed with today’s technology (Erickson, 2008). Such differing perspectives could lead to tension at the workplace between generations regarding the implementation and use of technology, and the process will be slow at most institutions.
Online Instruction for Graduate Programs

Historically, when the economy is down, people typically seek improvement in their education to have a competitive edge when the economy is up (Ebersole, 2013). The time, distance, and financial constraints of higher education have all disappeared since the arrival of distance learning via telecommunications and online technology (Obringer, 2002). In this day and age, the number of jobs requiring a postsecondary degree is higher than usual (Ebersole, 2013). Technology has played a vital role in developing degrees that would attract the nontraditional student. People with family or work responsibilities are often unable to commit to a traditional course because they cannot be in the same place at the same time (Kassop, 2003). Pursuing an education for career development, job security, upward mobility, finding other careers, and other professional and personal reasons has motivated people to return to school for a graduate degree (Eastmond, 1998). As a result of this, it is important to consider the benefits and challenges of an online education for graduate students.

Benefits

People seeking graduate degrees are taking advantage of online education because it is their only or best option to pursue a graduate degree due to current job demands (Obringer, 2002). Online programs offer flexibility and convenience by allowing mobile learners to engage in education when and where they wish (Eastmond, 1998). The effectiveness of taking online classes provides a good fit for adult learners’ goals of
professional development and obtaining an advanced degree in the field (Willging & Johnson, 2009). The students least likely to drop out of online courses are those employed as directors, managers, and coordinators (Willging & Johnson, 2009). Such people may be seen as more driven and self-motivated (Obringer, 2002).

**Challenges**

The use of online education requires some technological knowledge, current computer equipment, and a lot of self-discipline (Obringer, 2002). A study by Burge (1994) noted students enrolled in a web-based distance program identified challenges relating to peer interaction and difficulties associated with handling and managing large quantities of information and discussion posts. Such challenges included keeping a discussion on topic, procrastination in responding to postings, and topic misinterpretation (Murphy & Coleman, 2004). Other challenges included the lack of visual and hearing signs compared to the experience of face-to-face courses and working collaboratively with group members (Burge, 1994). Students could also encounter issues of isolation, disconnectedness, and technological problems—all of which may be factors influencing a student to leave a course (Willging & Johnson, 2009).

**Rationale for the Study**

Throughout education institutions, the use of online education is expanding rapidly to deal with budget deficits and access to education for a diverse student population. For-profit and private non-profit institutions have been implementing the use
of online education to attract students to their institutions and increase enrollment. Online education is a hot topic in public state-funded institutions, as is the potential impact of the online instruction in public classrooms. Higher education leaders are seeking ways to properly implement the use of online education at their institutions. San Jose State University began the process of implementing the MOOC platform for their online classes in order to measure success (Kolowich, 2013a). If such models will be used, faculty input and buy-in is crucial; to be successful, it is necessary to identify how the curriculum should be implemented and what type of support faculty would need. The purpose of this study was to investigate the impact of online instruction at a public 4-year institution and the role of faculty’s knowledge and skills in delivering online instruction. Measuring the faculty’s knowledge of technology is a critical component for delivering quality online instruction.

**Summary**

The literature collected for this study provided a better understanding of how online learning impacts faculty and students in higher education. The new technology of education would impact faculty by depriving them of the ability to share their knowledge and skills, the educational products they are able to produce, and ultimately their livelihood (Noble, 2001). Despite the challenges in higher education, the demand for innovation at public institutions is a serious matter to take into consideration. The use of online learning is becoming more favorable with faculty and students at education
institutions, as long as it is implemented correctly with the appropriate support. Even though online learning has its limitations, it can offer different approaches for making higher education accessible, adapting to learning styles, and learning best practices. More research is required on the topic of online learning to determine what support faculty need to be successful.
Chapter 3
METHODOLOGY

Introduction

The purpose of this study was to investigate faculty’s knowledge and skills with technology and how it can impact course development of online instruction. The study also aimed to identify whether online instruction is appropriate for graduate programs. The study involved a quantitative analysis with survey questions administered through a web-based questionnaire to answer the following research questions:

1. Do faculty members within the College of Education at a public 4-year higher education institution in California possess the technical knowledge and skills to develop online courses?
2. How does faculty’s knowledge of the use of technology impact course development of online instruction/teaching?
3. Is online instruction appropriate for graduate programs?

Setting of the Study

To protect the identity of the university, the researcher created a fictitious name for use in this study. The research for this study was conducted at Sunnydale State University, one of the public universities in the state of California. Sunnydale State University is a public institution founded in 1947. The university is composed of seven
colleges; it awards 6,500 degrees yearly to students and offers 58 undergraduate majors, 41 master’s degrees, six post-baccalaureate certifications, and two doctoral degrees. The university is vital to the Sunnydale area, contributing nearly $1 billion annually.

The average class size throughout the university is 38 students. The student-to-faculty ratio is about 28 to 1 and 17.2% of the school’s classes have fewer than 20 students. It has a total undergraduate enrollment of 25,541 students and a campus size of 300 acres. The most popular majors at Sunnydale State University include the following: Business, Management, Marketing, and Related Support Services; Social Sciences; Homeland Security, Law Enforcement, Firefighting, and Related Protective Services; Communication, Journalism, and Related Programs; and Psychology. The average freshman retention rate, an indicator of student satisfaction, is 80.5% (Office of Institutional Research [OIR], 2013).

Research Design

This study employs a quantitative research design that utilized an electronic questionnaire conducted through SurveyMonkey.com, an Internet-based survey tool. Quantitative research is used to quantify the problem by generating data that can be transformed into usable data, typically gathered by methods of various forms of surveys (Wyse, 2011). The survey was designed to answer the research questions through a series of closed-ended questions. The survey was divided into five subtopics: (a) demographics of the sample population, (b) technological knowledge and skills, (c)
teaching online, (d) curriculum development for online instruction, and (e) online graduate programs. The collected data included responses from faculty regarding their use and experience with technology, faculty experience with online teaching, and their perspectives regarding the development of online curriculum. The survey also included a section on perspectives from faculty on whether online instruction is appropriate for graduate students.

**Population and Sample**

Research for this study was conducted at Sunnydale State University in the spring of 2014. The faculty population at Sunnydale State University varied in gender and ethnicity. The following data were acquired from the 2013 University Fact Book (OIR, 2013). In 2013, the school had a faculty population of 1,479; 44.6% were full-time faculty and 55.4% were part-time faculty. The faculty gender was 50.3% female and 49.7% male. The faculty demographics reported were 4.9% African American, 1.1% American Indian, 11.4% Asian/Pacific Islander, 6.4% Latino, 70.7% White/Caucasian, 0.6% Multiracial, and 5.0% Other/Unreported. In addition, 39.4% of the faculty was tenured, 5.9% tenure track, and 54.7% non-tenure track (OIR, 2013).

The sample for this study reflects full-time faculty from the College of Education at Sunnydale State University. According to the OIR (2013), 123 full-time faculty members were reported as employees in the spring of 2013. Collaboration and approval with the department chair was critically important to the researcher’s process. Full-time faculty members at the College of Education were asked to participate in the study by
completing an online survey questionnaire in electronic format. Prior to survey participation, an electronic mail message was sent to each participant. The email included a letter of consent (see Appendix A) identifying the research topic, the purpose of the research, and the link to the survey (see Appendix B). Full-time faculty members were asked to follow the link to the survey if they chose to participate.

**Design of the Study**

The researcher conducted an extensive literature review on the historical context of distance education, faculty perspectives with online education, policy initiatives, curriculum, cost, access, student success, and the role of faculty with distance education. The researcher then conducted a web-based survey through SurveyMonkey.com to assist the researcher in identifying issues related to the development of online curriculum. The researcher then collected data addressing the three research questions and interpreted the data of technological knowledge and skills, curriculum development for online instruction, and online graduate programs into recommendations from the study.

**Data Collection Procedures**

The data were collected through an online questionnaire sent to full-time faculty from the College of Education. The anonymous questionnaire was sent through SurveyMonkey.com, an Internet-based survey tool. By the approval of the thesis chair, a link to the survey questions was provided through electronic mail along with a letter of consent. To preserve the confidentiality of the respondents, no personal data were collected. The data were collected from the sample of participants after the completion
of the web-based questionnaire. The number of completed surveys, response percentages, and response count were recorded. Of the 110 faculty members who were sent the electronic survey, 14 responded; this resulted in a response rate of 13%. The survey program computed descriptive and summary statistics from the survey responses. In addition, the answers to open-ended questions were analyzed and coded.

**Instrumentation**

The primary tools required for participants to access the survey included a computer, Internet access with a website browser, an email account, and Internet access to log onto SurveyMonkey.com. Faculty was expected to have a working computer with Internet access in order to access the surveys. Since the campus provided free Internet access to faculty and students, it was assumed that access to the Internet was not an issue. In addition, faculty was also required to have a valid email address. The other critical research tool was the Internet survey. SurveyMonkey.com was the company of choice to provide the tool to administer the survey. The interface design was quite simple to navigate, and the researcher received an email notification when a participant completed a survey.

**Data Analysis Procedures**

The data collected from the survey questions were gathered through the use of SurveyMonkey.com. The research questions provided the structure to organize the data gathered from the questionnaire. After organizing the data, the researcher was able to find patterns and common themes addressing the research questions. The survey tool
provided access to graphs and the ability to see additional comments from the participants. The following chapter presents the findings from the survey questions.

**Limitations of the Study**

This study was limited to surveying full-time faculty at the College of Education within a public university in California. Since the study was focused on one college of education, the study should not be generalized to other colleges of education. The number of participants should not reflect or be generalized for the entire College of Education. Because the online survey was anonymous and confidential, possible bias could have been present when answering the questions. Due to these limitations, the data should not have a crucial impact on the study of the use of technology.

**Summary**

The study included full-time faculty at the College of Education at Sunnydale State University. Sunnydale State University is a public 4-year institution founded in 1947. The study included a quantitative research design, administered through a web-based survey tool. The approval of the department chair was crucial in order to have participation from the department. A letter of consent with a link to the survey was sent to the email addresses of 128 full-time faculty members. It was critical for the participants to have access to a working computer, Internet access, and a valid email address to participate in the survey. Out of the 128 faculty members to whom the email
was sent, 14 responded to the survey. The researcher then used SurveyMonkey.com to gather the data and combine themes pertaining to the research questions.
Chapter 4

DATA ANALYSIS AND FINDINGS

Introduction

This study examined whether full-time faculty in the College of Education at a 4-year public institution in California possessed the technical knowledge and skills to develop online courses and identified whether online instruction is appropriate for graduate programs. The researcher utilized data gathered through an electronic survey; quantitative results were gathered and organized to answer the following research questions:

1. Do faculty members within the College of Education at a public 4-year higher education institution in California possess the technical knowledge and skills to develop online courses?

2. How does faculty’s knowledge of the use of technology impact course development of online instruction/teaching?

3. Is online instruction appropriate for graduate programs?

This chapter provides descriptive statistics collected from the faculty responses to the electronic questionnaire. The chapter analyzes and discusses the following themes from the findings: characteristics of the sample population, technological knowledge and skills, curriculum development for online instruction, and online graduate programs.
Characteristics of Sample Population

Demographics

The first sets of questions on the survey were about the participants’ demographics, such as number of years as a professor, age, gender, and ethnicity. The sample population consisted of 14 faculty members of the College of Education at a 4-year public institution. Of the 110 faculty members who were sent the electronic survey, 14 responded—a response rate of 13%. Table 1 reflects the age distribution of the sample population from the College of Education at a 4-year public institution.

Table 1
Age Distribution of Sample Population

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 to 44</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>45 to 54</td>
<td>54</td>
<td>7</td>
</tr>
<tr>
<td>55 to 64</td>
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<td>3</td>
</tr>
<tr>
<td>Over 65</td>
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<td>1</td>
</tr>
</tbody>
</table>

Table 1 shows the age distribution of the sample population of the respondents. The age for faculty ranged from 35 to over 65; a majority of the faculty were between the ages of 45-54. Fifteen percent of the respondents were between the ages of 35-44, and 23% were between the ages of 55-64. The minority of the faculty were over the age of
65. The sample population did provide a significant difference in gender distribution in the survey results. Of the 14 respondents, 10 identified as female and four identified as male. Seventy-one percent of the sample population identified themselves as females. Overall, a majority of the faculty members who completed the survey were female.

Respondents were also asked to indicate their ethnicity at the time of completing the survey. The majority of the respondents identified themselves as White/Caucasian and three identified as Hispanic or Latino. The minority of respondents identified as Black or African American. Two of the faculty members preferred not to answer.

Faculty members were also asked to identify the number of years they had taught at the College of Education at a 4-year public higher education institution. From the sample population, six respondents identified as teaching between 11-15 years, followed by four respondents teaching 6-10 years. Two faculty members identified themselves as teaching for more than 25 years and one had been teaching in the range of 16-24 years. From the sample population, all respondents identified themselves as teaching for at least 6 years.
Figure 1 represents a portion of the data collected regarding the ranges of years faculty members had been teaching at the College of Education that participated in the survey. A majority of the faculty who took the survey had taught at the College between 11 and 15 years. Overall, the data allow for the interpretation that the majority of the participants had a great deal of experience as faculty members at the College of Education.

**Technological Knowledge and Skills**

In the next set of questions, Questions 5-13, faculty were asked to rate their technological knowledge and skills on a range from a lot of experience to no experience.
When asked to rate their experience with computer operating systems, Microsoft Office, email programs, and web searching, 71% of the participants ranked as having a lot of experience using the technologies and 29% ranked as some experience. It was interesting that when asked about their experience with Internet browsers, 100% of the participants ranked as a lot of experience. However, when they ranked themselves regarding their knowledge of web searching (e.g., Google or Yahoo), 79% ranked as a lot of experience and 21% ranked as some experience. On Question 13, 77% of the participants ranked as a lot of experience in computer knowledge in general and 23% ranked as some experience. Thus, all participants had some to a lot of experience using computers.

In Questions 11 and 12, faculty members were asked more specifically about their knowledge and experience using online teaching. With online course support (e.g., course web pages, blackboard, or using WebCT) a majority of the faculty had a lot of experience using the online sources. The remaining 38% mentioned some experience and 8% had no experience with the online course support systems. Question 12 asked faculty to rank their experience on threaded discussions like electronic bulletin boards.
Figure 2 reflects the responses to Question 12, which asked faculty about their knowledge and skills with threaded discussion (e.g., electronic bulletin boards), and the results were spread out much more. For Question 12, 43% of the faculty marked some experience with threaded discussion, and 36% indicated they had a lot of experience. However, 14% of the faculty felt they had very little experience and 7% had no experience. When asked about the use of online learning sources, the majority of faculty still did not have high levels experience.

**The Use of Technologies**

To determine whether faculty members possessed the knowledge and skills to develop online learning, the research asked a set of questions regarding the current
technologies used by faculty. The participants indicated they had a high use of
technology devices and services, as shown in Figure 3.

**Figure 3** Current uses of technology

![Bar Chart](chart.png)

Figure 3 reflects the participants’ responses regarding their current use of
technology devices and technology services. When developing online curriculum, it is
important faculty have a good background with the use of technology and what type of
technology they use the most. The participants were asked to select all options that
applied to their current uses of technology. One-hundred percent of the participants
selected the use of broadband high speed Internet and the use of a laptop or netbook
computer. For handheld devices, 86% of the participants selected a smartphone with a
data plan allowing extensive use of Internet applications, and 64% indicated they
currently owned a tablet computer such as an iPad or Galaxy tablet. Less than 50% of the
participants indicated they owned a desktop computer or an electronic book reader. Overall, the majority of participants currently owned or used a majority of technology devices and services.

When participants were asked what type of cell phone they used, 93% of them indicated they used a smart phone with Internet access and 7% selected the use of a cell phone without Internet access. To determine accessibility, participants were then asked about the primary uses of their cell phones.

Table 2
Primary Use of Cell Phone

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Highly</th>
<th>Average</th>
<th>Low</th>
<th>Do not use</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone calls</td>
<td>62%</td>
<td>23%</td>
<td>0%</td>
<td>15%</td>
<td>13</td>
</tr>
<tr>
<td>Email</td>
<td>57%</td>
<td>21%</td>
<td>14%</td>
<td>7%</td>
<td>14</td>
</tr>
<tr>
<td>Internet Browsing</td>
<td>15%</td>
<td>38%</td>
<td>38%</td>
<td>8%</td>
<td>13</td>
</tr>
<tr>
<td>Applications</td>
<td>0%</td>
<td>57%</td>
<td>36%</td>
<td>7%</td>
<td>14</td>
</tr>
<tr>
<td>Video calls</td>
<td>15%</td>
<td>0%</td>
<td>46%</td>
<td>38%</td>
<td>13</td>
</tr>
</tbody>
</table>

The majority of the participants noted they used their cell phones at a high level for phone calls; 23% selected average use and 15% indicated they did not use their cell phones. Fifty-seven percent of the participants noted a high use of email, 21% an average use, 14% a low use, and 7% did not use their cell phones for email. For Internet browsing, 15% noted high use, 38% noted use of their cell phone from low to average, and 8% did not use their cell phone for Internet browsing. Fifty-seven percent of the
participants selected an average use of cell phone applications, 36% selected low use, and 7% did not use their cell phones for application use. Fifteen percent of the participants noted they used their cell phones for video calls, 46% had a low use of video calls, and 38% of the participants did not use their cell phone for video calls. Overall, a majority of the participants owned a smart phone with Internet access, and used it for many different purposes.

**Online Communication**

The next set of survey questions asked faculty about their use of technology communication and how effective and comfortable they felt when using it. Of the faculty who participated in the survey, 100% said they relied heavily on the use of email accounts for communication. However, 57% of the participants strongly agreed they felt comfortable expressing themselves through emails and threaded discussion forums while 29% agreed. Despite their heavy reliance on email accounts for communication, only 7% marked neutral and strongly disagreed they felt comfortable expressing themselves through emails and threaded discussion forums.

When asked whether faculty can effectively use a computer to communicate with other people, 79% of the participants strongly agreed and 21% agreed. Question 20 asked how effectively faculty used computers to communicate with other people using live online classrooms.
Figure 4 shows the variety of answers participants had in response to Question 20. The question focused on how effectively the participants used a computer to communicate with live online classrooms, and 31% of the participants selected a neutral response. However, when posed the question, 23% strongly agreed and 15% agreed they effectively used live online classrooms. It was interesting to note that 23% of the participants disagreed and 8% strongly disagreed, indicating they believed they could not effectively use a computer to communicate with other people using live online classrooms.

**Technology Skill Level**

Participants were asked how much they relied on technology, and a super majority (79%) indicated they highly relied on technology while a lower percentage of
them selected an average use (21%). However, to assess the participants’ overall technology skill level, the researcher asked the participants to rate their skill level regarding the use of technology. A majority of the participants noted an average skill level, with 57% noting some knowledge of one or more applications; this was followed by 43% selecting a high skill level indicating they were quite competent in their use of technology. In addition, faculty members were asked whether they felt they possessed the skills needed to develop an online course at a 4-year public higher education institution. All 14 participants responded to this question, and their wide range of answers is shown in Figure 5.

Figure 5  Do you feel you possess the skills needed to develop an online course at a 4-year public higher institution?
Figure 5 presents the participants’ comfort levels with the development of an online course. Using a scale from strongly agree to strongly disagree, the participants selected where they felt their skills were regarding developing online course work. Twenty-nine percent of the participants agreed with the question and 21% of the participants agreed with the question. Conversely, 29% of the faculty members disagreed with the questions and 7% strongly disagreed with the question. However, 14% of the faculty members were neutral on the question.

**Online Teaching**

In an effort to assess faculty members’ experiences with online instruction, the research asked questions about their experiences with online instruction and the type of support they believed would be required to develop online curriculum. For Question 25, 100% of the respondents indicated they had not received any of their degrees through online instruction. Participants were then asked if they had been offered an opportunity to teach an online course: 57% of the respondents said yes and 43% of the respondents said no. Although not all faculty members had been offered the opportunity to teach an online course, the researcher asked the participants what type of support they would need if they had to teach an online course (see Table 3).
Table 3

Online Course Technology Support

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>One-on-one training</td>
<td>85</td>
</tr>
<tr>
<td>One time training</td>
<td>31</td>
</tr>
<tr>
<td>Frequent trainings</td>
<td>54</td>
</tr>
<tr>
<td>24-hour tech support</td>
<td>69</td>
</tr>
<tr>
<td>Equipment support</td>
<td>92</td>
</tr>
</tbody>
</table>

Table 3 reflects the responses to Survey Question 27. Survey Question 27 asked faculty what type of support they would need if they had to teach an online course. Ninety-two percent of the respondents agreed they would need equipment support, 85% would require one-on-one trainings, and 69% would like to see 24-hour tech support. However, 54% of the respondents indicated they would require frequent trainings. Conversely, 31% of the respondents would like a one-time training to be available.

Prior to completing additional questions specific to curriculum development for online instruction, faculty were asked whether they had developed an online course at a higher education institution. All 14 respondents answered this question, but seven responded that they had never developed an online course. These respondents were prompted to end the electronic survey and were not required to complete Questions 29 through 38.

The remaining faculty members were prompted to continue with the following questions. Fifty percent of the faculty who started the survey continued through
completion of the survey. The data collected in the previous section supports the respondents’ technological knowledge, skills, and online course support. The data results support the following set of questions.

**Curriculum Development for Online Instruction**

To further understand faculty perspectives on their experiences with online course development, the researcher included questions regarding their experiences with online courses. Given that online courses are a fairly new experience for many faculty members, the questions sought to discover where the faculty had challenges and determine what kind of support was needed. Thus, the research sought information on the curriculum development experience for online instruction.

**Online Course Experience**

To assess the true experience of the development of online instruction, the researcher surveyed the respondents regarding their experiences with online courses. Survey Question 29 asked faculty whether the online learning software was easy to learn and navigate. Forty-three percent of the participants were neutral in their answer. However, 29% agreed with the question and 29% disagreed with the question. Similarly, Question 30 asked faculty whether it was easy to set up an online course. The respondents had a wide difference in experiences. Twenty-nine percent of the respondents selected neutral, disagree, and strongly disagree. Only 14% of the respondents agreed with the survey question. When asked whether it was easy for them
to teach in the online environment, 29% of the respondents strongly agreed and agreed with the question. However, 29% of the respondents strongly disagreed and 14% were neutral on the question.

**Training**

Survey Question 31 asked faculty whether the instruction from trainers about how to use the software was detailed and easy to understand. Twenty-nine percent of the participants agreed with the survey question, 29% were neutral, and 29% of the participants disagreed with the survey question. However, 14% of the participants strongly disagreed that it was easy to understand the instruction from trainers on the use of online software.

**Technological Challenges**

The next set of survey questions applied to the learning curves and challenges faculty encountered while teaching online courses. The researcher sought to determine what type of support faculty might need to obtain while teaching online courses. Table 4 reflects the technology tools perceived to have the highest learning curves.
Table 4

Highest Learning Curves with Technology Tools

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blackboard in general</td>
<td>100</td>
<td>7</td>
</tr>
<tr>
<td>Student email</td>
<td>29</td>
<td>2</td>
</tr>
<tr>
<td>Software used to develop course materials and content(e.g., MS Word, MS Powerpoint, MS Excel)</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>Classroom technology</td>
<td>29</td>
<td>2</td>
</tr>
<tr>
<td>Audio-video conferencing (e.g., Virtual Classroom)</td>
<td>57</td>
<td>4</td>
</tr>
<tr>
<td>Discussion boards</td>
<td>57</td>
<td>4</td>
</tr>
<tr>
<td>Live chat sessions</td>
<td>71</td>
<td>5</td>
</tr>
<tr>
<td>Social networking applications (e.g., Facebook, Twitter)</td>
<td>14</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 4 represents the results from Survey Question 33. Question 33 required respondents to select which technology tools they perceived to have the highest learning curve. One-hundred percent of the participants indicated that Blackboard had the highest learning curve. Respondents also felt there were high learning curves in live chat sessions at 71%, discussion boards at 57%, and audio-video conferencing at 57%. Only 29% of the respondents selected student email, and 29% indicated classroom technology to have high learning curves. Only 14% of the respondents indicated social networking applications, such as Facebook and Twitter, had a high learning curve.

In addition, faculty were asked whether they felt technical difficulties made it more challenging to teach online than in the classroom. All participants who answered the survey question encountered some sort of challenge at one time. Twenty-nine percent
of the respondents selected “I had technical difficulties but they did not affect my teaching.” Twenty-nine percent of the respondents selected “Not any more difficult than in the classroom.” Twenty-nine percent indicated it was somewhat more difficult to teach online than in the classroom. Only 14% of the respondents indicated it was much more difficult, with technical difficulties making it more challenging to teach online than in the classroom.

**Technology Barriers**

To understand the difficulties and challenges of technology, the researcher sought to follow up by identifying the factors faculty found to be primary barriers to the effective use of technology.

Table 5

Primary Barriers to the Effective Use of Technology

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of training</td>
<td>43</td>
<td>3</td>
</tr>
<tr>
<td>Lack of resources (hardware or software)</td>
<td>57</td>
<td>4</td>
</tr>
<tr>
<td>Technical problems or instability of technology tools</td>
<td>86</td>
<td>6</td>
</tr>
<tr>
<td>Lack of technical support</td>
<td>29</td>
<td>2</td>
</tr>
<tr>
<td>High frequency of change in technology tools</td>
<td>43</td>
<td>3</td>
</tr>
<tr>
<td>Amount of time required to learn technology</td>
<td>71</td>
<td>5</td>
</tr>
<tr>
<td>Student knowledge of technology</td>
<td>43</td>
<td>3</td>
</tr>
</tbody>
</table>

Table 5 reflects the results from the respondents in identifying the primary barriers to the effective use of technology. A supermajority of the participants indicated
that technical problems or instability of technology tools were primary barriers in the use of technology. Seventy-one percent of the participants indicated the amount of time required to learn technology was a barrier, and 57% of the participants selected the lack of resources such as hardware and software. Two participants offered additional comments, stating that some aspects of Blackboard were tricky to learn and there were issues with students viewing streaming video and having to use specific Internet browsers. However, only 29% of the participants noted that the lack of technical support was a primary barrier to the effective use of technology.

**Online Graduate Programs**

In addition to understanding the faculty’s technological knowledge and skills, it was important to understand what worked and what challenges were encountered with online curriculum. The researcher selected questions to determine whether online programs are appropriate for graduate students. Thus, the researcher sought information on online graduate programs.

**Benefits of Online Graduate Courses**

Survey Question 36 asked faculty if they believed graduate students benefitted from online courses. Eighty-six percent of the respondents said yes, they did believe graduate students benefitted from online courses. Only 14% of the respondents said no, they did not believe graduate students benefitted from online courses. To follow up,
faculty were asked what they believed was the most beneficial for graduate students using online instructions.

Figure 6    Benefits for graduate students using online instruction

Figure 6 displays the faculty responses to the survey question. Question 37 asked faculty what they believed were the benefits for graduate students using online instruction. Eighty-six of the respondents selected time flexibility as a major benefit for graduate students, 43% selected mobility as a benefit, 29% selected low requirement of face-to-face instruction, and 29% selected accessibility to technology.

Challenges for Graduate Students

In addition to the benefits for graduate students using online instruction, the research posed a survey question to identify the biggest challenges for graduate students taking online courses. A majority of the respondents identified the lack of face-to-face
instruction and lack of technological knowledge to be the biggest challenges for graduate students. Only 17% of the respondents identified technology equipment as a challenge. Conversely, faculty did not believe Internet access was a challenge for graduate students taking online courses.

**Analysis of Findings**

**Technological Knowledge and Skills**

According to the findings, the use of technology was relied heavily upon by the participants. The data showed high levels of experience with the use of computers, software, cell phone use, and the Internet. Seventy-seven percent of the participants noted a lot of experience with computers in general, and 100% had a high level of experience with the use of Internet browsers. However, when asked detailed questions about their use of Internet search engines like Google or Yahoo, 79% of participants ranked as a lot of experience and 21% ranked as some experience. Seventy-nine percent of the participants also noted they highly relied on the use of technology. However, only 43% noted their skill level regarding the use of technology to be quite competent, and 57% indicated they had some knowledge with the use of technology.

Figure 5 demonstrated the comfort level the participants felt in the development of online curriculum. A small percentage of the participants strongly agreed they had the skills to develop online curriculum. Fourteen percent were neutral and 29% disagreed
with the question. Despite the high level of experience with technology, the participants were not as confident that they had the skills needed to develop online curriculum.

Participants indicated a high level of trainings was needed for them to develop online curriculum. Table 3 reflected the types of support faculty believed were needed. A supermajority of the participants indicated a need to have equipment support, one-on-one trainings, and 24-hour tech support. The lack of technology support could have an impact on the development of online courses, causing them to be incorrectly implemented.

**Curriculum Development for Online Instruction**

To better understand whether the technological knowledge and skills of faculty impact the development of online curriculum, the researcher asked questions pertaining to their experiences with online instruction. Since not all the participants had taught online courses, the researcher asked them to end the survey prior to answering questions pertaining to curriculum development. Fifty percent of the participants continued with the survey. Forty-three percent of the participants were neutral regarding ease of use of the online learning software, pertaining to learning and navigating through it. Of the participants, 29% agreed and 29% disagreed with the use of online learning software. Table 4 represented which technology tools had the highest learning curves, with Blackboard chosen by 100% of the participants. Seventy-one percent of the participants agreed that live chat sessions had a high learning curve, followed by audio-video conferencing and discussion boards.
To determine whether the support was meeting their needs, faculty members were asked whether the instruction from trainers about how to use software was detailed and easy to understand. The findings had a set of different answers, with 29% of the participants selecting agree, neutral, and disagree. Only 14% of the participants strongly disagreed that the support from the trainers was detailed and easy to understand. Table 5 highlighted participants’ selections regarding the primary barriers to the effective use of technology. Eighty-six percent of the participants indicated that encountering technical problems or the instability of technology tools was a primary barrier in the use of online learning. In addition, 71% of the participants responded that the amount of time required to learn how to use the technology was also a primary barrier to its effective use.

Despite the challenges and barriers encountered in the use of online education, 14% of the participants answered that the technical difficulties made it much more difficult to teach online than in the classroom. Twenty-nine percent of the participants noted they had difficulties with the use of technology and that it was somewhat more difficult than teaching in the classroom. Lack of appropriate support limited faculty members’ effective use of online education.

**Online Graduate Programs**

In an effort to assess whether online learning is adequate for graduate programs, the researcher asked participants questions regarding their perceptions of online use for graduate students. When asked whether participants believed graduate students benefitted from online courses, 86% of the participants said yes and 14% said no. Figure
6 displayed participants’ beliefs about the benefits for graduate students using online instruction. Eighty-six percent of the participants felt online instruction allowed graduate students to have time flexibility, and 43% noted that mobility was a benefit. However, only 29% felt the low requirement of face-to-face instruction was a benefit, and another 29% felt the accessibility to technology was a benefit.

In addition, to understand the benefits of online instruction, the researcher asked questions regarding the challenges graduate students can encounter with online instruction. Sixty-seven percent of the faculty indicated the lack of face-to-face instruction and the lack of technological knowledge could be challenges encountered. Only 17% noted that having access to technology equipment would be a challenge.

**Summary**

In summary, faculty members’ technological knowledge and skills earned an average rating. Although the participants identified challenges with the development of online curriculum, it was identified that a majority of faculty had the technological platform needed to teach online courses. Fifty-seven percent of the participants felt they had an average skill level regarding the use of technology. In addition, 29% of the participants felt they had the skills needed to develop an online course. However, 29% also noted they did not have the skills to develop an online course. Also, 86% of the participants agreed that they believed online courses were appropriate for graduate students.
This chapter examined the data and reviewed the findings collected from faculty at the College of Education at a 4-year public institution. The researcher organized and presented findings as they related to the research questions referring to the characteristics of the sample population, technological knowledge and skills, curriculum development for online instruction, and online graduate programs. The data examined faculty responses regarding their knowledge and skills with technology pertaining to the development of online courses.
Chapter 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The use of technology has been increasing in our daily lives, from the way we communicate in our personal lives to being part of our jobs. Even though the topic of online education has been popular at higher education institutions, it has been slowly adopted at our public institutions. There has been a small amount of research on how to effectively implement the use of online learning at public higher education institutions and what determines best practices to ensure faculty have the tools needed to succeed. There is a need to further research how to properly implement the use of online learning at public institutions. This study examined whether full-time faculty in the College of Education at a 4-year public institution in California possessed the technical knowledge and skills to develop online courses and identified whether online instruction is appropriate for graduate programs. With the use of a quantitative design, which was used to measure the data to formulate facts and uncover patterns for the research (Wyse, 2011), the researcher used an online survey to answer the following research questions:

1. Do faculty members within the College of Education at a public 4-year higher education institution in California possess the technical knowledge and skills to develop online courses?
2. How does faculty’s knowledge of the use of technology impact course development of online instruction/teaching?

3. Is online instruction appropriate for graduate programs?

The findings of this research provided a better understanding of what types of support faculty would need to develop online curriculum. With the popular use of technology and the Internet, the expansion to online education will soon be adopted at a larger scale. For-profit higher education institutions have adopted the use of online education at a much faster pace. With public institutions beginning to adopt online education, it would open opportunities to continue the research and develop best practices.

The literature review was conducted to understand online learning and its components. The review covered a historical aspect of how online technology has been growing throughout the past decade and how the MOOCs have been key players in the implementation of online education. Legislation in the state of California has also been a key driver in offering incentives for the adoption of online education at public higher education institutions. The discussion of hybrid courses has been a platform implemented at a larger scale with positive outcomes. Curriculum, instruction, technology competency, and student success were discussed as topics to consider when implementing the use of online education. The change to the traditional delivery of education was covered, and it can be foreseen that challenges would include the impact on professors, cost, access, and equipment. The use of online education would be an
additional skill for faculty members to obtain and implementing it correctly would be a historical event in higher education.

This study was conducted a public 4-year higher education institution within the College of Education located in Northern California. The sample population consisted of 14 faculty members at the College of Education at a 4-year public institution. A quantitative analysis with survey questions administered through a web-based questionnaire was used to collect the data. A letter of consent was sent to faculty through an electronic mail before proceeding with the survey. The data collected from the questionnaire were the demographics of the sample population, faculty technological knowledge and skills, the development of online curriculum, online experience, and the appropriateness of online education for graduate programs. The data results were organized in the order relating to the research questions.

**Conclusions**

The sample population participating in the study was full-time faculty members, with a majority of them considered Baby Boomers. Table 1 highlighted the age distribution of the sample population, with 54% of the respondents between the ages of 45-54. More than half the sample population was between the ages of 55-64, and less than one-third were between the ages of 35-44. Figure 1 displayed the number of years the faculty members had been teaching at the College of Education. Forty-six percent of the participants had been teaching between 11 and 15 years, one-third had been teaching
between 6 and 10 years, and less than one-third had been teaching between 16 and 24 years. The findings of the demographics section of the survey support the fact that a majority of the survey participants identified as Baby Boomers.

The researcher focused on three themes: (a) technological knowledge and skills, (b) curriculum development for online instruction, and (c) online graduate programs. According to the findings, the researcher found that the use of technology was heavily relied upon by the participants. Seventy-nine percent of the participants also noted they highly relied on the use of technology. Yet, a small percentage of the participants agreed they felt comfortable with the development of online curriculum. For the faculty who had taught online education, the researched asked a set of questions focusing on their experiences with online education and the type of support they felt was required. It was found that the use of Blackboard had the highest learning curve along with live chat sessions and discussion boards. A majority of the participants also noted the amount of time required to learn the technology was a barrier to their success; thus, appropriate trainings and support should be implemented. The researcher found a majority of the participants agreed that online education is appropriate for graduate students, due to the benefits of time flexibility and mobility. The participants also noted challenges graduate students could encounter, such as the lack of face-to-face instruction and lack of technological knowledge.
**Recommendations**

The data collected from this study demonstrate the need to further research whether the knowledge and skills of faculty help support the development of online curriculum. The development of online courses is a key factor in correctly implementing them without having a negative impact on the students. Knowledge and skills with technology can be used as a platform to measure faculty’s readiness to develop online courses. To ensure faculty appropriately implement online curriculum, further studies should continue to identify what type of support would be needed. The pedagogy of online courses should be further researched to avoid impacting student success.

The recommendation is to expand the research with other departments and universities, since this research was only conducted with one particular department and university. Higher education institutions have different needs and the way departments teach can vary. Adapting to the needs of students can vary from institution to institution due to a diverse population, resulting in the need to better understand what best practices would help support faculty in the development of online curriculum. In addition, research should be conducted on which programs would benefit most from online courses.

Finally, further research should study how the development of online courses is impacting student success. Further research should measure how students are adapting, including grades and drop-out rates from the courses. It is also important to examine how faculty’s use of technology would impact their use of online courses. Identifying what
resources and support faculty would need might give faculty a positive feeling about the use of online education. As administration understands the need to have knowledge of technology and determine best practices, it would provide a platform to ensure faculty have the appropriate support in the transition to online education.
APPENDICES
APPENDIX A

Email for Participation in Study/Letter of Consent

From: Rosseau, Venesha

Subject: Faculty Survey Participation Request

Sent on Behalf of Dr. José Chávez, Educational Leadership and Policy Studies

Faculty Members,

You are invited to participate in a study aimed at identifying faculty’s technical knowledge and skills needed to develop curriculum and teach online. You are invited to participate in this survey as a faculty member, regardless of whether or not you have taught online instruction.

Your participation in this survey is completely voluntary. If you decide to participate in this survey, you will have the option to skip questions without having an impact on the rest of the survey. You may also withdraw from taking the survey once you have started if you choose to.

The survey will take between 10-13 minutes, depending on your responses. All responses will be confidential, no identifying data will be collected, and all data will be aggregated into a survey report. The results of this study will be used for scholarly purposes and a possible conference presentation on online teaching.

Please click on this link to take the survey: https://www.surveymonkey.com/s/LY95VWS

If you have any questions or concerns about the survey or study, please contact:

José Chávez, at □□□□□□□□□□ or □□□□□□□□□□.

Thank you for taking time to complete the survey.

JOSÉ CHÁVEZ
APPENDIX B

Electronic Survey

Survey Protocol for Faculty

Demographics

1. How many years have you been teaching at the College of Education at a 4-year higher education institution?
   - 1-5 years
   - 6-10 years
   - 11-15 years
   - 16-24 years
   - 25+

2. Age:
   - Under 25
   - 25-35
   - 36-45
   - 46-55
   - 56-65
   - Over 65
3. Gender:
   o Male
   o Female

4. Ethnicity:
   o Caucasian
   o African American
   o Latino
   o Asian
   o Native American
   o MultiRace
   o Other

**Technological Knowledge & Skills**

What is your current level of experience in using the following technologies?

5. Computer Operating System (e.g., PC, Mac, etc.)
   o No Experience
   o Very little experience
   o Some experience
   o A lot of experience
6. Microsoft Office (e.g., Word, PowerPoint, spreadsheet, etc.)
   o No Experience
   o Very little experience
   o Some experience
   o A lot of experience

7. Email programs (e.g., Outlook Express, Yahoo, Gmail, etc.)
   o No Experience
   o Very little experience
   o Some experience
   o A lot of experience

8. Imaging device (e.g., using scanner, digital or video camera, etc.)
   o No Experience
   o Very little experience
   o Some experience
   o A lot of experience
9. Internet browsers (e.g., Google Chrome, Safari, Internet Explorer, etc.)
   - No Experience
   - Very little experience
   - Some experience
   - A lot of experience

10. Web searching (e.g., Google, Yahoo, etc.)
    - No Experience
    - Very little experience
    - Some experience
    - A lot of experience

11. Online course support (e.g., course web pages, Blackboard, Web CT, etc.)
    - No Experience
    - Very little experience
    - Some experience
    - A lot of experience
12. Threaded discussions (e.g., electronic bulletin board)
   - No Experience
   - Very little experience
   - Some experience
   - A lot of experience

13. Computers in general
   - No Experience
   - Very little experience
   - Some experience
   - A lot of experience

14. I currently use the following technologies: (Please select all that apply.)
   - Broadband (high speed DSL/cable, etc.) Internet access at home
   - Smartphone with data plan that allows extensive use of Internet applications
   - Tablet computer (iPad or Galaxy tab, etc.)
   - Laptop or Netbook computer
   - Desktop Computer
   - Electronic book reader
15. What cell phone do you use?
   - I don’t use a cell phone
   - I use a cell phone (no Internet access)
   - I use a smartphone (with Internet access)

16. What is your cell phone primarily used for? Rank from 1-5, with 1 indicating most used and 5 least used.
   - Phone calls
   - Email
   - Internet browsing
   - Applications
   - Video calls

17. Please tell us about your use of email.
   - I don’t use email
   - I use email as little as possible
   - I rely heavily on the use of email accounts for communication
18. I can effectively use a computer to communicate with other people.
   - Strongly agree
   - Agree
   - Neutral
   - Disagree
   - Strongly disagree

19. I can effectively use the Internet to find information to complete a task I have to do.
   - Strongly agree
   - Agree
   - Neutral
   - Disagree
   - Strongly disagree

20. I can effectively use a computer to communicate with other people using live online classrooms.
   - Strongly agree
   - Agree
   - Neutral
   - Disagree
   - Strongly disagree
21. I feel comfortable expressing myself through emails and threaded discussion forum.
   
   o Strongly agree
   o Agree
   o Neutral
   o Disagree
   o Strongly disagree

22. What is your skill level regarding the use of technology?
   
   o Highly—Quite competent
   o Average—Some knowledge of one or more applications
   o Low—Occasionally use a personal computer
   o Zero—Have never used a personal computer

23. How much do you rely on technology?
   
   o Highly
   o Average
   o Low
   o Zero
24. Do you feel you possess the skills needed to develop an online course at a 4-year institution?
   - Strongly agree
   - Agree
   - Neutral
   - Disagree
   - Strongly disagree

Teaching Online

25. Have you received any of your degrees through online learning?
   - Yes
   - No

26. Have you been offered an opportunity to teach an online course?
   - Yes
   - No

27. If you had to teach an online course, what type of support would you need?
   - One-on-one training
   - One-time training
   - Frequent trainings
   - 24-hour tech support
   - Equipment support
28. Have you developed an online course at the College of Education at a 4-year public institution? If you answered Yes, proceed with survey.

- Yes
- No

Curriculum Development for Online Instruction:

29. The online learning software is easy to learn and navigate.

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

30. It is easy to set up an online course.

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree
31. The instruction from trainers about how to use the software is detailed and easy to understand.
   - Strongly agree
   - Agree
   - Neutral
   - Disagree
   - Strongly disagree

32. Teaching in the online environment is easy for me.
   - Strongly agree
   - Agree
   - Neutral
   - Disagree
   - Strongly disagree
33. Which of the following technology tools do you perceive to have a high learning curve? (Please check all that apply.)

- Blackboard in general
- Student email
- Software used to develop course materials and content (e.g., MS Word, MS Powerpoint, MS Excel)
- Classroom technology
- Audio-video conferencing (e.g., Virtual Classroom)
- Discussion boards
- Live chat sessions
- Social networking applications (e.g., Facebook, Twitter)
- Other technologies (please specify)

34. Do you feel technical difficulties made it more challenging to teach online than in the classroom?

- Not applicable—I did not have any technical difficulties.
- Not applicable—I had technical difficulties but they did not affect my teaching.
- Not any more difficult than in the classroom.
- Yes—somewhat more difficult.
- Yes—much more difficult.
- I do not teach in the classroom.
35. Which of the following factors did you find to be primary barriers to your effective use of technology? (Please check all that apply.)

- Lack of training
- Lack of resources (hardware or software)
- Technical problems or instability of technology tools
- Lack of technical support
- High frequency of change in technology tools
- Amount of time required to learn technology.
- Student technology challenges
- Other factors (please specify)

Graduate Programs

36. Do you believe graduate students benefit from online courses?

- Yes
- No

37. What do you believe is the most beneficial for graduate students using online instruction?

- Time flexibility
- Low requirement of face-to-face instruction
- Mobility
- Accessibility to technology
38. What do you believe can be the biggest challenge for graduate students taking online courses?

- Lack of face-to-face instruction
- Lack of technological knowledge
- Internet access
- Technology equipment

Thank you for your participation.
REFERENCES


