

ABSTRACT

ROSS, ROBIN LYNN. Faculty Perceptions of Factors That Influence the Incorporation of Service-Learning Experiences into Online Courses (Under the direction of Dr. James Bartlett and Dr. Michelle Bartlett).

This descriptive research study aimed to explore the factors that influence community college faculty when considering the incorporation of Service-Learning (SL) experiences into online courses. The study was based on the Technology Acceptance Model (TAM) framework, expanded to include additional factors such as social norm, self-efficacy and institutional factors. The purpose was to identify barriers and facilitators of SL integration into online courses and investigate their relationship with faculty's behavioral intention to adopt SL. An online, self-administered questionnaire was distributed to faculty teaching in the North Carolina Community College system. The data were used to describe the study participants' demographic characteristics, determine experience with service-learning, and examine perceived barriers and facilitators to implementation of service-eLearning. Identified barriers were factors of perceived ease of use (faculty don't understand the facilitator role in SL and don't believe it easy to incorporate, self-efficacy (don't believe being more competent with technology will help) and institutional factors (even if tech were more reliable, they couldn't incorporate SL in online courses). Four facilitating factors dealt with self-efficacy (I could incorporate SL if I had a template, seen someone else use SL used online previously, had used SL previously, and had technical assistance) and subjective norm (people important to me in my job would support me). Correlation was used to determine the relationship of perceived ease of use, perceived usefulness, subjective norm, self-efficacy, institutional factors and intent to use service-eLearning in online courses. Perceived usefulness was the only variable to have a significant positive correlation with intent to use.

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Faculty Perceptions of Factors That Influence the Incorporation of Service-Learning Experiences
into Online Courses

by

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BIOGRAPHY

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She looks forward to being able to enjoy free time again, planning the next big hiking trip and spending more time with her family, friends and six dogs.

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CHAPTER 1: INTRODUCTION

Service-learning (SL) has a rich, long history as a teaching adjunct and its beginnings can be traced as far back as the eighteenth century to Ignatian pedagogy. Ignatian pedagogy was named after Saint Ignatius of Loyola, founder of the Society of Jesus (Jesuits). In 1599, the first official version of the Ratio Studiorum (Latin for plan of studies) was completed. This document provided what the Jesuits called “our way of proceeding” in the education of Jesuits (Hise & Massey, 2010, p. 454).

The central concepts of Ignatian pedagogy included the following aspects of Jesuit education: Ignatian pedagogy insists on individual care and concern for each person, assists in the total formation of each individual within the human community, is values oriented, pursues excellence in its work of formation, relies on a spirit of community and encourages lifelong openness to growth (Hise & Massey, 2010).

In the early 1900’s, John Dewey, the founder of the Progressive Education movement, penned ideas on democratic education that paralleled the central concepts of Ignatian pedagogy. Dewey was known for his beliefs and ideas regarding democracy, education, and learning from experience. Dewey believed that experience should never be the result of education. Instead, experience should be the first step or the starting point of the educational process. As humans, we are not static beings but instead, we constantly change and grow based on our experiences in life. Dewey felt civic action, education and democracy were intertwined and each was enriched by the other (Knowles et al., 1998).

Interest in SL became renewed in the 1960s and 1970s during times of political, social, and economic chaos. Student activists and educators began breaking away from teacher-centered classrooms and developed community-centered structured learning environments. This time of

political and social upheaval became the modern foundation of what is now known as service-learning (Slavkin, 2007).

Service-learning has been described using different terms throughout the literature base. Terms such as action learning, service-learning, experiential learning, and learning in action, are often used interchangeably to describe SL. Jeandron and Robinson (2010) describes SL as programs which “involves students in activities that address local needs, while developing their academic skills and commitment to their communities” (p. 1). The term service-learning has also been used synonymously with other terms such as volunteerism, service, experiential learning, fieldwork, experiential education, etc. Clayton et al. (2013) penned the most quoted definition of service-learning (SL), and this definition will be used for the purpose of this dissertation.

Service-learning is defined as:

A course or competency-based, credit bearing educational experience in which students

- (a) participate in mutually identified service activities that benefit the community, and
- (b) reflect on the service activity in such a way as to gain further understanding of the course content, a broader appreciation of discipline, and an enhanced sense of personal values and civic responsibility. (Clayton et al., 2013, p. 6)

The benefit of utilizing SL in the classroom as a teaching adjunct was summed up nicely by Honnet and Poulson (1989, p. 1), who stated, “Service, when combined with learning, adds value to each and transforms both.” Service-learning combines community service with classroom instruction, focusing on critical and reflective thinking, and personal and civic responsibility. Service-learning involves students in activities that address local needs while developing academic skills and commitment to their communities. Service-learning exceeds volunteerism. Service-learning provides the opportunity for students, faculty, parents, and

community to be involved as equal participants in solving problems and addressing the needs of a community (Slavkin, 2007).

Learning from experience is described as learning that is “intrinsically worthwhile” because it captures student interest by dealing with problems that awaken student curiosity and a need to know that extends over a period of time. Referencing a study by Whitehead, cognitive scientists found that students rarely transferred knowledge learned in the classroom to new problems. The scientists found that only repeated attempts to solve similar problems, with support and encouragement to apply what was learned, led to application (Eyler & Giles, 1999, p. 68). When SL experiences are incorporated into the curriculum, students are provided with the types of learning experiences that afford them the opportunity to work with others through a process of acting and reflecting to achieve real objectives for the community and a deeper understanding for themselves.

Traditionally, SL has been incorporated into seated curriculum courses however, the educational landscape continues to shift, with colleges and universities continuing to transition to more online or distance learning courses. Allen and Seaman (2013) found that colleges and universities show no signs of slowing down in the online arena and online education continues to expand at a faster rate than traditional seated or curriculum-based courses. The researchers noted the number of students that were enrolled in at least one online course was 32% of the enrollment of participating institutions in the study. This represented an increase of 570,000 students from participating institutions from the previous academic year. In fall of 2014, there were 2.8 million students taking all their higher education instruction online, representing 14% of all students (Allen et al., 2016).

Statement of the Problem

Service-learning risks being left behind as more faculty transition more course offerings to online environments. Khan (1997) describes the web as a “powerful, global, interactive, dynamic, economic and democratic medium of learning and teaching at a distance” (p. 6). Although technology affords educators the opportunity to reach more students across diverse geographic areas, higher education institutions struggle with the problem of how to deliver the same quality learning experiences through online learning platforms that provide quality learning experiences for students in a fast-paced, complex society (McDonald et al., 2014). Colleges and universities alike have invested substantial resources in web-based learning systems to support teaching and improve student’s learning experiences and student performance. The success or failure of these systems depends heavily on the factors that influence the user’s acceptance and use of the system.

While the pace of online learning has increased dramatically, incorporation of service-learning experiences in the online environment (service-eLearning) remains rare. Waldner et al. (2012) observed anecdotally that some instructors who were proponents of SL chose not to utilize SL when they transitioned their courses to an online format. Those instructors viewed technology as a barrier to conducting SL when transitioning to online environments. Dailey-Herbert et al. (2008) suggests the move to service e-Learning will force some faculty to abandon SL if they are unable or unwilling to make the transition in online environments. Waddill et al. (2010), in their discussion of the future of action learning, note instructors who wish to utilize SL in online courses will have to adapt and overcome many obstacles for SL to survive.

Purpose Statement

This study's main purpose is to identify the factors which faculty perceive may either facilitate or hinder the implementation of SL in online environments. Service-learning has been shown to have numerous benefits for student learning, engagement and retention, therefore, it would be reasonable to believe faculty who utilized SL in their seated courses would transition the same learning experiences into the online environment. By determining what factors faculty believe facilitate or hinder faculty in the transition of service-learning experiences into the online environment, community college administrators and other college personnel will be armed with data to make sound decisions as how to best implement service-eLearning at their institution and identify the types of training and support needed for online instructors to successfully transition SL into the online environment.

Theoretical Framework

The technology acceptance model (TAM) will be utilized as this study's theoretical framework. The TAM has been the most widely utilized theoretical framework to study technology acceptance and adoption. Developed in the late 1980's by Fred Davis, TAM was developed to explore user acceptance of computers, more specifically the use of electronic mail in the workplace. Although information technology can improve work performance for employees, user acceptance and willingness to use technology has been a long-standing problem in Information Systems technology. A measure that would better explain and predict system utilization had a practical and financial value for organizations considering technology adoption (Davis, 1989).

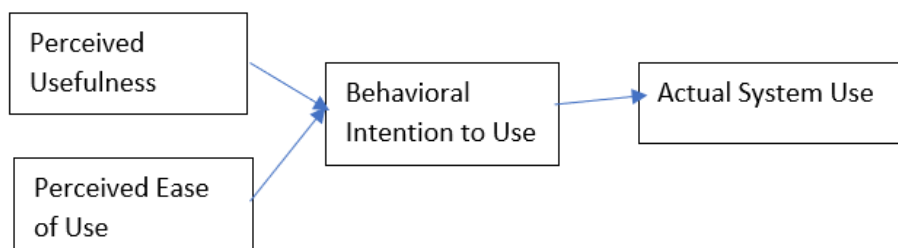
The TAM was derived from the Theory of Reasoned Action (TRA). TRA is based on the assumptions that people are rational beings that use information systematically to make

decisions. The theory viewed most people's intention to perform or not perform a behavior as the immediate determinant of action (Yuen & Ma, 2008). Although TRA hailed from the discipline of social psychology, TRA is a general model that was not specifically designed for specific behaviors or technology. The generality of the TRA is what makes it applicable across many disciplines. TRA posits that a person's behavior is determined by their intention to carry out that behavior (behavioral intention). Behavioral intention is determined by an individual's attitude and the subjective norms relating to the conduct or behavior in question (Rondan-Cataluña et al., 2007).

Davis developed the TAM as an adaptation of the TRA specifically tailored for modeling user acceptance of technology. The goal of TAM was to provide a general explanation of the determinants that explain user behavior across a wide range of end-user technologies and user populations (Rondan-Cataluña et al., 2015). Davis' research focused on two theoretical constructs, perceived usefulness, and perceived ease of use, as the major determinants of an individual's intention to use technology. Figure 1 is a graphical representation of the TAM developed by Fred Davis.

Figure 1.1

Technology Acceptance Model



Note. From “A Model of the Antecedents of Perceived Ease of Use: Development and Test,” by V. Vankatesh and F. Davis, 1996, *Decision Sciences*, 27(3), p. 453, <http://dx.doi.org/DOI:10.1111/j.1540-5915.1996.tb00860.x>.

Perceived usefulness (PU) is defined as "the degree to which a person believes using a particular system will enhance his or her job performance." This follows the definition of the word useful: "capable of being used advantageously." A system high in perceived usefulness is a system where the user believes a positive user-performance relationship exists. Perceived usefulness implies that a person will use or not use an application based on whether the application will help them perform their job better (Davis, 1986, p. 320).

Perceived ease of use (PEU) refers to "the degree to which a person believes that using a particular system would be free from effort." This definition is derived from the word ease, which means: "freedom from difficulty or great effort" (Davis, 1986, p. 320). If the potential technology user views the applications as useful but believes the performance benefits are outweighed by the effort required to operate the application, the users may not adopt the technology because it is too hard to use (Davis, 1986, p. 320). Over time, the TAM has been used in a variety of contexts and has become accepted as a robust and powerful model for predicting user acceptance and adoption of technology (Rondan-Cataluña et al., 2015).

The TAM can be used as the theoretical framework to examine faculty perceptions regarding the usefulness and perceived ease of use when incorporating SL into online courses. While many faculty may view SL as a particularly useful tool to build a sense of community, achieve course learning objectives and increase student engagement in the classroom environment, if faculty believe SL is too labor intensive or too difficult to implement in online courses, they may choose instead to forgo the use of SL in their online courses.

Conceptual Framework

While PU and PEU are important factors in determining technology acceptance or usage, there are other factors which must be considered to gain a more complete picture of the issue of

technology acceptance (Claggett & Goodhue, 2011). Building on the TAM's theoretical framework to better understand faculty acceptance and adoption of service-eLearning, personal, social and institutional constructs must be considered and included in the conceptual framework. Understanding the social, personal, and institutional factors and the relationships these factors have on employee performance will allow for more improved and targeted training mechanisms that will be reflected in improved levels of performance in individuals or groups within an organization (Marakas et al., 1998).

The conceptual framework expands the basic constructs of the TAM, PU and PEU, to include the new variables of subjective norm, institutional factors and self-efficacy to investigate the extent to which these variables affect faculty's willingness to adopt and use SL in online courses. The conceptual framework was developed from a comprehensive literature review that included articles from the areas of technology, teaching and learning, education, Service-learning, technology acceptance, service-eLearning, psychology, and human resources development.

The variables of subjective norm, institutional factors and self-efficacy were conceived from a review of the TAM and variations of the TAM such as the TAM2, TAM3, the Unified Theory of Acceptance and Use of Technology (UTAUT), Social Learning Theory, and self-efficacy (Marakas et al., 1998; Rondan-Cataluña et al., 2015).

The two primary variables of the TAM, PU and PEU, are the fundamental determinants of technology user acceptance and have been widely validated throughout information systems literature (Davis, 1989; Venkatesh, 1999; Venkatesh & Davis, 1996, 2000; Yuen & Ma, 2008). While the TAM is a useful model, it needs to be incorporated into a broader model which considers variables that are related to human and social change processes to better explain the

adoption or non-adoption of an innovative technology. The factors of subjective norm and self-efficacy will be used to explore the human and social factors which may influence user technology acceptance. Subjective norm refers to an individual's belief or perception that people who are important to him think he/she should or should not perform the behavior in question. More simply stated, if individuals who are important to the user believe that he/she should perform the behavior in question, the user is more apt to perform the behavior (Yuen & Ma, 2008).

The second social factor used to explore technology user acceptance is self-efficacy. Self-efficacy stemmed from the works of Arthur Bandura and his Social Learning Theory (SLT). Bandura (1977) examined self-efficacy and the role it played in the behavioral change process. Bandura's early works defined self-efficacy as

people's judgements of their capabilities to organize and execute courses of action required to attain designated types of performances. It is not concerned with the skills one has, but with judgements of what one can do with whatever skill one possesses.

(Bandura, 1985)

The concept of self-efficacy has been expanded into other areas or fields of research, such as information systems (IS) technology, to determine what type of factors influence behaviors that lead to change or performance with computers and computer systems (Claggett & Goodhue, 2011).

Much like subjective norm and self-efficacy, institutional factors may also impact user acceptance of technology. While there are many factors that could be included in this category, for this dissertation's purpose, the items of technology, process, and administration will be used as the primary factors which comprise the category of institutional factors.

Technology includes the items of access, reliability and complexity. Reid (2014) notes that technology or increased access to technology will have little impact on learning and faculty will not increase usage of technology unless there is institutional change to support technology usage. Instructors who plan to use technology but who have extra tasks associated with use of technology such as obtaining, setting up and the return of laptops or other equipment may find the benefit of using technology outweighed by the extra work. Like access to technology, users who found technology to be unreliable or too complex to use were much less likely to utilize it. Learning management systems must have a well-designed user interface to help decrease cognitive load and help users derive more benefits when using the system (Liu et al., 2010).

Process refers to the implementation, support given to faculty, students and staff and the professional development centered around technology. An important aspect of the process deals with the development of a sound implementation plan. Technology implementation plans that do not consider mitigation or minimization of unintended consequences, potential liabilities or have no specific, measurable goals may not be widely implemented and can be an expensive failure met with limited success. Plans need a clear vision for the institution, leadership to drive the change, critical mass, incentive, faculty participation and ways to measure success. Without these elements, faculty may be left to make their own choice on adoption of the technology (Tamarken, 2010).

Almost as important as an implementation plan, support for faculty and students must be considered when adopting technology. One of the greatest barriers to adoption of technology is a lack of instructor skills and knowledge. This need may also be compounded by the aspect that faculty needs change as they become more familiar and adept at using the technology (Aypay et al., 2012; Buchanan et al., 2013; Reid, 2014). Common complaints of lack of support are

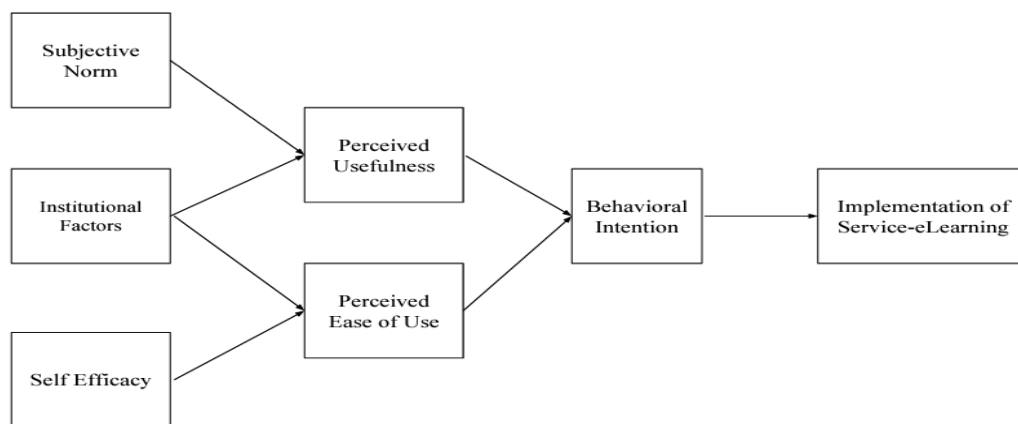
typically associated with lack of technical support, lack of instructional design/support, support not focused on faculty needs, inconvenient support times/availability, and lack of support for adjunct faculty.

Meeting student support needs can be as challenging as meeting faculty support needs. While many students are well versed in certain forms of technology, many students have little or no experience with databases, smartboards, and learning management systems (Lloyd et al., 2012).

Finally, administrative support is the final institutional factor that should be considered when considering faculty adoption of new technology. A unique and important aspect in higher education that often occurs in the adoption of technology is that top management often expects faculty to use institution-wide systems regardless of the faculties desire or motivation to use the system (Buchanan et al., 2013). Figure 2 shows the relationships of subjective norm, institutional factors and self-efficacy to perceived usefulness and perceived ease of use in the implementation of service-eLearning.

Figure 1.2

Conceptual Framework



Adaption to workplace change is a process where individuals learn, negotiate, enact and maintain the behaviors appropriate to a given organizational environment” (Bruque et al., 2008, p. 178). E-learning is becoming increasingly more ingrained as a learning platform in education and institutions are investing larger portions of their budgets to e-learning systems in hopes of creating lively learning communities that are not limited by geographical boundaries (Persico et al., 2014).

Research into user acceptance of technology continues to occur today. The TAM has been shown to be a reliable and valid model for explaining user technology acceptance and has been adapted by others to explore the social and organizational factors which may also play a role in technology adoption (Granic & Marangunic, 2019; Yuen & Ma, 2008).

Utilizing these same principles or concepts of the TAM and extended models of the TAM which further explored social factors impacting technology adoption, this research aims to identify the factors that faculty perceive as either hindering or facilitating the incorporation of service-eLearning into online courses. Faculty who views SL experiences as an important part of the learning process but who may be intimidated by technology, have low computer self-efficacy or do not have institutions that provide appropriate levels of support, may not continue to utilize SL in their online courses. Helping institutions understand what levels of support faculty need to continue this practice not only ensures the survival of SL but supports a sound pedagogical practice that continues to benefit the faculty, students and the community at large.

Research Questions

Given the importance of providing students with quality learning experiences regardless of the delivery method utilized and the current shift of offering more online courses by

educational institutions, the researcher formulated the following questions to further study service-eLearning:

1. What variables do faculty identify as barriers to the implementation of service-eLearning in online courses?
2. What variables do faculty believe are associated with facilitating the implementation of service-eLearning in online courses?
3. What is the relationship of perceived ease of use, perceived usefulness, subjective norm, self-efficacy, institutional factors, and intent to use to the incorporation of service-learning into online courses?

Significance of the Study

This research has the potential to impact the field and build knowledge because service-eLearning is a fairly new area of interest and study. While there has been extensive research conducted in the very separate and distinct areas of technology adoption, online education and SL, there is a dearth of information that may be found for service-eLearning. This research has the potential to add to the current literature base by examining the current level of service-eLearning being conducted at the community college level and identifying factors faculty believe inhibit or encourage the implementation of service-eLearning. Identification of barriers and facilitators to the implementation of service-eLearning will allow researchers to make recommendations for the successful transition and implementation of traditional service-learning experiences to service-eLearning experiences in online courses and in turn, preserve a useful pedagogical practice for online instructors.

Higher education institutions are under increasing pressure to adopt affordable, sustainable approaches that provide access to non-traditional students. Over the past two

decades, Buchanan et al. (2013) report there has been a rapid rise in computer use and internet technology for pedagogical purposes in colleges and universities worldwide. Often, higher education administration makes decisions regarding technology and learning management systems without consideration of the faculty's desire or motivation to use the system.

Gaining a deeper understanding of the factors that may facilitate or hinder faculty implementation of service-eLearning can help guide campus policymakers to make fiscally sound decisions regarding technology purchases. Identifying factors that contribute to the adoption of SL in online courses can help guide administrators and institutions in the planning, training, implementation and adoption of a sound SL training/faculty education plan.

Delimitations

This study was limited to community colleges within North Carolina (NC). Four-year colleges and universities were excluded from this study because its intent is to assess the level of service-eLearning occurring at the community college level. There is a well-documented literature base regarding service-learning in colleges and universities; however, little information exists regarding service-learning or service-eLearning occurring at the community college level.

When initially considering community colleges across a geographical region (NC, South Carolina, Georgia and Virginia), the researcher found significant differences across each of the state community college systems. Due to the large number of institutions throughout the Southeastern US and the differences across state educational systems, the focus of the research was narrowed to NC community colleges only.

Definitions of Terms

Action learning is defined as learning process where the student studies their actions and experiences to improve their performance (International Institute of Management, 2017).

Andragogy is defined as an intentional activity, guided by educators, whose goal is to change adult learners (Knowles et al., 1998, p. 60).

Behavioral intention is defined as a behavior that is determined by an individual's belief in their ability to perform said behavior (Rondan-Cataluña et al., 2015, p. 790).

Career readiness is defined as acquiring the knowledge and demonstrating the skills the needed for college graduates for a successful transition to the workforce (National Association for Colleges and Employers [NACE], 2016).

Community service is defined as engaging students in activities that focus on the service as well as the benefits the service activity has on the recipients (Furco, 1996, p. 4).

Computer self-efficacy is defined as the individual's belief in their ability to use technology (Yuen & Ma, 2008, p. 233).

E-learning is defined as blending experience with technologies (Baasanjav, 2013, p. 576).

Field education is defined as co-curricular service opportunities related to academics, designed to enhance a student's understanding of a program of study (Furco, 1996, p. 5).

Globalization is defined as emphasizing global perspectives rather than local, regional or religious viewpoints (Waddill et al., 2010, p. 262).

Internship is defined as a program that engages students in hands-on learning experiences through service activities that enhances or supports their understanding of issues important to a field of study (Furco, 1996, p. 4).

Leadership is defined as achieving common goals by leveraging other's strengths and using interpersonal skills to coach and develop others. The leader can assess and manage his/her emotions, demonstrate empathy to guide and motivate others, and has the ability to organize, prioritize, and delegate work (NACE, 2016).

Leadership Development is defined as programs designed to promote the skill development and decision making for new and existing leaders (Waddill et al., 2010).

Online learning is defined as courses in which the majority of all the content is delivered online with no face-to-face meetings (Allen et al., 2016, p. 7).

Pedagogy is defined as learning to teach children (Knowles et al., 1998, p. 61).

Perceived ease of use is defined as how easy it is for a person believes to use a system (Davis, 1986, p. 320).

Perceived usefulness is defined as how useful a person believes a system or tool is in enhancing their job performance (Davis, 1986, p. 320).

Self-efficacy is defined as an individual's belief in their ability to perform an action or produce a result of a specific action (Tarhini et al., 2013, p. 192).

Reflective practice is defined as intentionally being open to other perspectives, to allow new ideas or beliefs that may challenge pre-existing knowledge (Merriam et al., 2007, p. 157).

Reflective thought is defined as awareness of one's own knowledge, assumptions and past experiences (Dewey, 1910/1997, p. 6).

Service-eLearning is defined as active learning through technology that engages learners through service, reflection, and action (Dailey-Herbert et al., 2008, p. 1)

Service-learning is defined as a credit bearing course that requires students to participate in community-based service activities with the intention of gaining knowledge, an enhanced sense of personal value, and increased civic awareness through reflection thinking (Clayton et al., 2013, p. 6).

Subjective norm is defined as a person's belief that people who are them in their job would support an action (Tarhini et al., 2013, p. 191).

Technochanges is defined as significant changes in one's work through the adoption of IT (Bruque et al., 2008, p. 178).

Transformative learning is defined as a change in one's original perspective based on the acquisition of new knowledge or learning (Nohl, 2015, p. 35).

Volunteerism is defined as engaging students in service activities where the emphasis is on the service being provided and the beneficiary is the recipient of the service (Furco, 1999, p. 4).

Organization of the Study

This study seeks to understand the factors that faculty perceive to be barriers or facilitators to the implementation of service-eLearning. For institutions that currently value service-learning and want to continue to offer these opportunities in online courses, understanding these perceptions can assist in developing institutional cultures that support service-eLearning, put institutional supports, such as financial support, technical support, mentoring, and service-learning training, in place to help ensure a more successful transition of service-learning experiences into the online environment.

To support the research questions in this study, it is important to understand the context and evolution of service-learning. Chapter one introduces the historical context of service-learning as a pedagogy, the benefits associated with SL experiences in the classroom and discusses the current shift from traditional seated teaching to online learning. This chapter discusses the statement of the problem the research questions address, the use of the Technology Acceptance Model (TAM) as a theoretical model, the conceptual framework built from the theoretical model, and the significance of the study.

Chapter two provides the reader an understanding of the relationship of SL to higher education, how SL fits into the adult learning theory framework, and then discusses benefits of using SL. The discussion then shifts to Service-eLearning typology and discusses the challenges, best practices, and limitations of service-eLearning to understand the challenges or needs faculty may experience when transitioning from traditional SL to service-eLearning.

The final chapters (Chapters 3-5) describe the process used to create the methodology, the presentation of the research results, and concludes with the discussion of the results in Chapter 5.

Chapter Summary

Chapter one discusses the historical context of service-learning through the years and the importance of experiential learning to knowledge acquisition and civic awareness. The TAM, developed by Fred Davis, is used as the theoretical model for this study. The TAM and expanded versions of the TAM were used to create the conceptual framework used for this study. This chapter introduces the research questions and discusses the significance of the study to the preservation of service-learning in online teaching environments. Delimitations of the study and definitions of terms conclude this chapter.

CHAPTER 2: REVIEW OF THE LITERATURE

The review of literature includes five sections, with each section presenting foundational content which provides a discussion of adult learning theory, defines SL and service-eLearning, describes the benefits of SL as a pedagogy, and examines how the changing educational landscape and the role of technology may impact the future of service-eLearning.

Section one considers the historical context of higher education, and the role SL plays in relationship to the goals of higher education institutions. Historical context is important because it provides awareness of factors that have influenced and shaped the utilization of SL as a teaching strategy in higher education institutions. Section two discusses seminal works of adult learning theorists such as Dewey, Knowles, Kolb, and Mezirow and examines the relationship of adult learning theory and SL. This section will examine aspects of each learning theory and discuss the relationship and the potential impact of the theory to SL. Section three provides an overview of SL, which includes a discussion of the components of a SL curriculum and the benefits of SL to the students, the educational institution and the community. Section four defines service-eLearning and discusses the categorization of different degrees or types of service-eLearning currently in practice today. This section is of particular importance because having a foundational understanding of service-eLearning typologies ensures faculty who are interested in incorporating service-eLearning into online courses also have a template or roadmap to develop service-eLearning experiences which best fits their course, provides positive learning experiences for students, positive teaching experiences for instructors, and benefits the college and the community served. Finally, section five examines the current shift of educational institutions to provide more online offerings. This examination is important because it provides practitioners context on how the shift from seated course offerings to more online course

offerings may be contributing to a decline in SL opportunities in online environments. This section also includes an examination of online learning that includes best practices for student engagement, best practices for service-eLearning, and the incorporation of service-eLearning as a best practice in online teaching.

Higher Education's Relationship to Service-Learning

Higher education institutions have always had a dual purpose of not only educating their constituents, but also serving the needs of their respective communities (Cohen & Brawer, 2008). The Morrill Act of 1862 laid the foundation for a system of state colleges and universities (National Archives and Records Administration, 1995). Under this act, the Federal Government allocated 30,000 acres to each state, with the explicit purpose of establishing colleges for its citizens (National Archives and Records Administration, 1995). These new educational institutions, called land grant colleges, were originally established for agriculture and mechanical arts. Land grant institutions provided educational opportunities to farmers and other working individuals who were previously excluded from higher education (National Archives and Records Administration, 1995). The Morrill Act made higher education more accessible in the hope of enhancing the nation's economic, technological, and civic development of its citizens.

For the first time, citizens had not only the opportunity to learn trades and techniques, but to also have exposure to integrated academics (Gordon, 2014). The Morrill Act redirected the focus of higher education by providing access to higher education to a more public audience, highlighting mechanical arts and agriculture to a prominent status, and promoting career and technical educational institutions as "models for solving urban and rural problems" (Gordon, 2014, p. 69).

Like the original land grant institutions, community colleges today face a similar call to educate their citizens, become more engaged with their respective communities and focus on the civic education of their students (Felton & Clayton, 2011). John Dewey (2004), founder of the progressive theory of education, believed that community service should be a part of every student's educational experience.

Service-learning experiences can serve as a high-impact pedagogical tool for educators and institutions to conceptualize teaching and learning in ways that connect the campus to the community. Service-learning programs should have academic context and be designed to ensure that the service enhances the learning, and the learning enhances the service (Furco, 1996). Traditional volunteer efforts are typically focused on the recipient of the service. Unlike volunteerism or community service, SL programs focus on three areas: the learning or content of the coursework, the learner and the recipient of the service being provided (Taggart & Crisp, 2011).

The relationship of Service-learning to adult learning theory is woven throughout the works of scholars such as John Dewey's Progressive Education movement, Malcolm Knowles' Theory of Andragogy, David Kolb's Experiential Learning model and finally, Jack Mezirow's Transformational Learning theory. The following section will briefly examine each adult learning theory and its connection to SL.

Seminal Works in Adult Learning Theory

Adult learning theory (andragogy) is based on the premise that adults learn differently than children (Elias & Merriam, 2005; Knowles et al., 1998; Merriam et al., 2007; Merriam & Brockett, 2007). Pedagogy, the art and science of teaching children, assigns full responsibility of what content is to be learned, how the content is learned, when the content will be learned and

the determination of whether the content has been learned to the teacher (Knowles et al., 1998). Pedagogy was considered an inactive or passive form of learning that did not encourage active engagement or active learning on the part of the student.

Paulo Freire likened this passive educational process to that of a banking system where students are the depositories and teachers are the depositors. Freire saw the educational process as an oppressive system that “submerges the consciousness of the students and produces an alienated consciousness since students are not involved in a real act of knowing but are rather given a ready-made view of social reality” (Elias & Merriam, 2005, p. 159). Freire argued that learning did not take place in a controlled environment but instead flowed naturally from one experience to the next. Learning that resulted in empowerment and consciousness-raising allows students to act in their world in different ways and results in emancipatory transformation of the individual (Baumgartner, 2001).

Andragogy, on the other hand, is more often thought about as a way of working with adult learners or a “set of assumptions and methods pertaining to the process of helping adults learn” (Merriam & Brockett, 2007, p. 135). Why is it important that we differentiate how adults learn? Current demographics show that there are more adults in our society and based on current predictions, this trend will continue as the population ages. According to statistics gathered from the US Census Bureau (2020), persons under the age of 18 comprised only 22.1% of the total population. Seventeen percent of the total population were 65 years of age or older. The remaining 61% of the total population are workers between ages 18-65. The educational attainment level for individuals 25+ years is 86.7% for high school graduates and 29.8% for individuals earning a bachelor's degree or higher. Data indicates that the baby boomer generation is more educated, more ethnically diverse, has more women in the workforce, and are more

likely to occupy managerial and professional professions. This trend is expected to continue upward over the next twenty years. Educational institutions are expected to meet the learning needs of all their constituents, which includes this large demographic.

Another group of adult learners who are currently impacting higher education is the millennial generation. Born between 1982 and 2000, millennials are considered the most diverse generation educators teach. Millennials expect to be engaged in their courses and have an expectation of engaging through technology in their courses. A list of attributes describing students who have grown up using technology indicates that millennials believe that computers are not technology and are more a part of their everyday life. Millennials also believe that doing is more important than knowing. The half-life of information in today's world is so short that knowledge is no longer believed to be the ultimate goal in learning. Instead, results and actions are considered more important than knowledge and facts (Oblinger, 2004).

Following the millennials, Generation Z learners came into education with an increased desire for technology in courses and use technology inside and outside the classroom. Gen Z students desire to work autonomously but also desire interaction with others and opportunities to hone their skills through application experiences (Isaacs et al., 2020).

Finally, the National Center for Educational Statistics (NCES) reports that over 70 percent of currently enrolled students meet at least one of the characteristics that define how adult learners are classified. These characteristics used to classify adult learners include being a single parent or caregiver, having dependents, working full-time and being the responsible party for household finances (Keener, 2017).

As the social demographics of our students continue to change, it is important for educators to recognize these trends and how these trends may impact the educational or learning

needs of our students and our society. Educators need to adapt to these changing needs and provide learning experiences that meet the needs of all the students we serve. Utilizing and incorporating learning experiences that address multiple learning styles, actively engages learners in the learning process and provides benefits to the learner and the community is beneficial to all served. Faculty should be deliberate in offering meaningful learning experiences and service opportunities that allow students to make connections to course content and real-world application. Service-learning is one such teaching strategy that may be utilized to meet learning needs across the age continuum.

Dewey and Experiential Learning

The underlying concept of experiential learning theory is based on learning through experience. John Dewey (1916/1966) was a strong proponent for progressive educational reform and felt that education should be based on the principle of learning through doing. Dewey believed that education and learning are social and interactive processes, and that school is a social institution where social reform can take place. Dewey believed the nature of experience is continuous and that experience, inquiry and reflection are key elements in the learning process.

Dewey's concept of experiential education allows a holistic viewpoint of education in that learning is based upon interactions between a being and the world. Experience is the central aspect of interactions, which includes communication, historic and cultural aspects, rather than the individual or mental aspects (Birkeland & Odemotland, 2018). Eyler and Giles (1999) believed that knowing and doing cannot be severed. Like Dewey, they believe learning is a:

whole-hearted affair, linking emotions and intellect; an educative experience is one that fosters student development by capturing student interest-indeed their passion-because it

is intrinsically worthwhile and deals with problems that awaken student curiosity and a need to know that extends over a considerable amount of time. (p. 8)

Therefore, experience enhances understanding and understanding leads to more effective actions.

In the early 20th century, learning focused on the delivery of knowledge from the teacher to the students. Much like Friere, Dewey (1916/1966) saw this type of learning as monological – an authoritarian one-way street – which was not conducive to learning nor creating educated, democratic citizens. Dewey (1996, p. 78) stated, “Under the existing conditions far too much of the stimulus and control proceeds from the teacher, because of neglect of the idea of the school as a form of social life.” In other words, classroom instruction was fruitless unless a student was given the ability and opportunity to apply knowledge to concrete situations and solve social problems.

Dewey (1938/1998) believed that students thrive in an environment where they can experience and interact with the curriculum, and all students should have the opportunity to take part in their own learning. An interactive type of learning environment produced civically engaged citizens and school was paramount to creating social change and reform (Dewey, 1938/1998).

Dewey also strongly believed occupational studies could prepare students to understand “the science of tools and process used in work, develop an appreciation for the historic evolution of industry, instill favorable group dynamics of shared discovery and communal problem solving, and plan and reflect on the entire process” (Gordon, 2014, p. 43). By connecting the student and the community in an interactive process, relationships develop, and students begin to develop an awareness or consciousness of his or her actions and their implications for society.

Malcolm Knowles and Andragogy

The science of helping adults learn, andragogy, is rooted as far back as 1833, but Malcolm Knowles has generally been credited with the popularization of the term and the concept of andragogy in the United States (Knowles et al., 1998). According to Knowles, andragogy is based on four assumptions about characteristics of adult learners different from those of pedagogy. The four assumptions are that as a person matures: 1) his self-concept moves from being one of a dependent personality toward one of being a self-directed human being, (2) he accumulates a growing reservoir of experience that becomes a resource for learning, (3) his readiness to learn becomes oriented increasingly to the developmental tasks of his social role, and 4) his time perspective changes from one of postponed application of knowledge to immediacy of application, and accordingly his orientation toward learning shifts from one of subject centeredness to one of problem centeredness (Knowles, 1998, p. 39).

Later, Knowles developed a fifth and sixth assumption: (5) the potent motivators are internal rather than external and (6) adults need to know why they need to learn something (Merriam et al., 2007, p. 84).

Knowles (1998) proposed that there are two conceptions of self-directed learning. First, self-directed learning is seen as self-teaching, where learners can take control of the mechanics and techniques of teaching themselves in a subject. Knowles suggested that as adults mature, they become more independent and self-directed in their learning and classrooms should be designed to support a climate of acceptance, respect, and support.

Secondly, self-directed learning is perceived as personal autonomy. This implies that the learner takes control of the goals and purpose of learning, thereby assuming ownership of their

learning experience. The relationship of the instructor and student should be one of “joint inquirers”, that is, both are active participants in learning. Knowles also believed that adult learners were responsible for their learning and should participate in diagnosing their learning needs, be involved in the planning, implementation, and evaluation of their learning experiences (Merriam et al., 2007, p. 85).

In addition to being self-directed in their learning experience, adult learners tend to incorporate prior experiences into their learning (Knowles, 1988). These prior experiences tend to either shape or interfere with new learning. Argyris and Schon (1982) describe this type of learning as either a “single loop” or “double loop” learning experience.

Single loop learning involves learning materials that fit the learner’s prior experiences and existing values and enables them to respond in an automatic way. Single loop learning is also referred to as “knowing in action” and implies that the knowledge gained by the learner is rote knowledge or learning that enables us to perform efficiently or automatically.

Double loop learning, also called “reflection in action” typically does not fit the learner’s prior experiences, which causes them to alter their mental schema. This type of learning involves reflecting while performing, enabling the learner to discover that pre-existing knowledge or schemas may no longer be appropriate. The learner is then able to change or alter their schema, which then creates new knowledge from experience (Knowles et al., 1998, p. 140).

Adult learners bring a diverse combination of life experience, knowledge, and self-direction to the classroom. This unique combination of qualities enables the adult learner to be a more participative student who can help drive the content, method of content delivery and provide valuable feedback to help guide the refinement of courses and instruction (Kiely et al., 2004).

Kolb's Experiential Learning Model

Building upon Knowles' theory of andragogy and incorporating the reflection in action concept of Argyris and Schon's double loop experience, David Kolb also believed that adults learn through experience and that learning is "the process whereby knowledge is created through transformation of experience" (Knowles et al., 1998, p. 147). These prior experiences tend to either shape or interfere with new learning. Learning is not strictly an individual process and the learning that does occur in social contexts tends to shape the learning experience differently for individuals based on their prior experiences.

Experiential learning theory supports the belief that ideas are not fixed elements of thought but instead, are formed and re-formed through experience. No two thoughts are ever the same since experience always intervenes (Kolb, 1984, p. 26). In the article, "Social Context of Adult Learning," Jarvis (1987, p. 11) recognizes that as individuals grow and mature, they become who they are based on the total experiences they experience in life. Their experiences are shaped by factors such as socioeconomic status, their community, geography and gender.

Therefore, two learners with very different life experiences may come away from the same learning experience with two very different perspectives. Other learning theories take adult learning theory one-step farther. These theories posit that a student's prior knowledge and experience should be capitalized upon to generate new learning. These individuals believe when life experiences are accompanied by reflection, the effects of learning can be long lasting (Jarvis, 1987).

Kolb's experiential learning theory identifies four stages or modes of the learning cycle. Kolb believed that students may enter the four-stage cycle at any point and the learning cycle should be viewed as a continuous or cyclical process. The learning cycle typically begins with a

person carrying out an action and then seeing the effect of the performed action (concrete experience). The second step of the learning cycle (observations and reflections) involves understanding the effects or circumstances of the action. Step three (formation of abstract concepts and generalizations) allows the learner to anticipate the results if the action were repeated. Finally, step four (testing implications of concepts in new situations) enables the learner to make decisions and solve problems encountered in new situations. Although Kolb believed that the learning cycle could begin at any stage, for learning to become transformed into understanding, all four components of the learning cycle must occur (Chan, 2012, p. 406).

Later, Kolb and Kolb took the experiential learning process one step farther. They examined the works of Dewey, Piaget, Jung, Rogers and others to develop six general propositions of experiential learning theory. The six propositions are: 1) learning is best perceived as a process, not an outcome, 2) Learning is relearning, 3) Learners must move between “opposing modes of reflection, action, thinking and feeling, 4) Learning is holistic, 5) Learning involves interactions between the learner and the environment and finally, 6) Learning is constructivist in nature (Merriam et al., 2007, p. 164).

Clark et al. (2010) discusses the potential of experiential learning models and practices in career and technical education. Traditionally, career and technical education have incorporated experiential education into its curriculum through clinical rotations, internships, work-based learning, and apprenticeships. These curriculum-based experiences afford students real life opportunities to actively engage in the learning process while acquiring work and technology skills in the workplace.

Like internships, apprenticeships, clinical rotations and work-based learning, SL experiences built into all curriculum types afford all students the opportunity to learn in social

contexts, acquire knowledge which can be put into practice, reflect on experiences which affords the opportunity to reinforce, challenge and construct new ideas, and assume ownership of their learning while becoming involved in social and community issues.

Mezirow and Transformational Learning Theory

Like previously discussed adult learning theorists such as Dewey, Knowles and Kolb, Jack Mezirow also viewed learning as a process of active inquiry. To learn, adults must learn to make our own interpretations of experiences and knowledge instead of relying on the thoughts and beliefs of others. Based on our experiences, we as adult learners, create our frames of reference (associations, feelings, concepts, values and conditioned responses) that define our life and how we make sense of it (Kasworm et al., 2000). Transformational learning is learning that occurs because of experiences which cause us to change the way we view ourselves and the world around us.

The transformative learning process is based upon a series of ten elements or phases that Mezirow believed should occur for transformation to occur in individuals. The phases include:

1. A disorienting dilemma. 2. Self-examination with feelings, of fear, anger, guilt, or shame. 3. A critical assessment of assumptions. 4. Recognition that one's discontent and the process of transformation are shared. 5. Exploration of options for new roles, relationships, and actions. 6. Planning a course of action.
7. Acquiring knowledge and skills for implementing one's plan. 8. Provisional trying of one's role. 9. Building competence and self-confidence in new roles and relationships. 10. A reintegration into one's life on the basis of conditions dictated by one's new perspective. (Nohl, 2015, p. 36)

Our frames of reference about the world encompass cognitive and emotional components, which includes our habits of mind and points of view. Our habits of mind and points of view are our abstract ways of thinking, feeling and acting that are influenced by our social, economic, political, educational and cultural interactions. These then become our position or perspective in which something is evaluated or considered. Transformational learning theory implies that we learn together when we analyze our related experiences with others to arrive at a common understanding that we hold until we have new evidence which causes us to question and change our beliefs (Mezirow, 1997).

Through the experience, the learner must critically self-examine the assumptions and beliefs that have structured how the experience has been interpreted. Mezirow believed this set into motion the revision of beliefs the learner had about themselves and others. This process of revising the learner's beliefs causes assumptions to be changed or transformed into new meaning (Merriam et al., 2007).

The new meaning(s) created is considered highly subjective and changeable. For learners to test their new knowledge as true or authentic, learners may seek out others' opinions and engage in discourse. Participating in healthy discourse with others allows learners to weigh the evidence for or against the argument and critically assess their assumptions. Discourse is not a "war or debate." Learners should have equal opportunity to participate in discourse, evaluate arguments objectively and have empathy (Mezirow, 2000, p. 13).

The last step of transformational learning deals with action. Once a learner has participated in discourse and new learning has occurred, learners may not be content with the status quo and feel a need for action. Action can range from something as simple as making a decision about something (i.e... I will start recycling to reduce my carbon footprint on the

environment) to something as radical as engaging in political protest. Actions may be immediate, delayed or simply a reaffirmation of existing patterns of action (Merriam et al., 2007). Action is a three-step process that begins with becoming aware of the need for change. This need for change occurs because of or through the process of reflection on the learner's experience. Second, a "feeling of solidarity with others committed to change" is established and finally, the learner must learn what actions are considered appropriate in particular situations to implement the change (Merriam et al., 2007, p. 135).

Common threads of the adult learning theories discussed here include active learning or contextualization of the curriculum, exposure to events that cause one to alter their habits or thinking, reflection and then a move to action based on the learning that has occurred. Service-learning experiences can provide all students, regardless of age, the opportunity to become immersed in and an active participant in the learning process.

Educators have an obligation to provide quality learning experiences which are engaging and challenging to their students. Service-learning may be utilized in our courses to help bring our classrooms to life by creating learning experiences that are immersed in everyday events and situations, potentially creating the cognitive discourse needed to help learners create new meaning and spur them into action.

Service-Learning

Why utilize Service-learning in courses? As discussed in the prior section, today's learners demand learning environments that are more learner centered and engaging. Coupled with the changing learning needs of our students, institutions of higher education are being challenged to be more accountable and responsive to changing societal expectations, with the

expectation that they become more involved in social, civic, economic, and ethical issues (Kasworm et al., 2000; McPhail & McPhail, 2006; Xiao et al., 2021).

Many educators struggle to develop effective, academically sound classroom practices which provide students an opportunity to learn course content, participate in civic engagement opportunities and promote the development of democratic citizens (Fiume, 2009). Service-learning is one such teaching method that incorporates academic learning objectives, active inquiry, and critical reflection (Felton & Clayton, 2011; Greenleaf & Goertzen, 2021).

Impacts of Service-Learning

Service-learning has been described as an active, student-engaged learning experience or activity that can be a powerful teaching pedagogy, producing important benefits for students, faculty, colleges and their community partners. Benefits to students, such as increased civic awareness and engagement, development of critical thinking skills, leadership development, and knowledge acquisition have been well documented throughout the literature (Faulconer & Kam, 2023; Felton & Clayton, 2011; Marsick & Watkins, 2001; Ponder et al., 2012).

Civic Awareness and Engagement

Service-learning experiences have been created to revitalize a sense of community in students, create or strengthen their sense of civic engagement, and create citizens who are socially aware, active and who genuinely want to improve the world (Boyle-Baise et al., 2007; Celio et al., 2011; Rhoads, 2003). Education for citizenship is closely tied to social problem solving. Successful SL experiences engage young people in “responsible and challenging actions for the common good” (Slavkin, 2007, p. 4).

When students have an active, participatory role in an initiative to improve society, such as working for social justice or caring for the environment, students recognize how participation

and the ability to respond to these needs improves the quality of life in their community, which may lead to the development of lifelong ethics of service and civic engagement (Seider et al., 2012).

During the times of civil unrest in the United States in the 1960's and 1970's, the use of SL exploded across college campuses in the United States (Jacoby, 1996). Students not only focused on learning about social problems but also addressing those issues through social action. Service-learning provides opportunities for students to participate in social problem solving. One of the arguments for SL as a form of social inquiry is that it links education or learning to genuine community problems. Community colleges are ideally suited to promote social involvement and community engagement because of the close ties to its community of interest (Crisp, 2011; Krasny 2020).

While SL experienced significant growth in the 1960s and 1970s, SL experienced a downturn in the 1980's. Jacoby (1996) primarily attributed the downturn to faculty failing to establish effective SL programs; however, a large portion of the decline was a result of a neo-liberal agenda that de-emphasized the value of community service in education. In the late 1980's, educators and others noticed the lack of concern for community in students and SL experienced a resurgence in education.

Service-learning programming involves students in activities that address local needs while developing academic skills and commitment to their communities (Jeandron & Robinson, 2010). Service-learning exceeds volunteerism by providing the opportunity for students, faculty, parents and community to be involved as equal participants in solving problems and addressing needs of a community (Slavkin, 2007). Collaboration between educational institutions, our

students and their respective communities is imperative for each entity to develop to its fullest potential.

As members of the higher education community, we can no longer exist in the ivory towers that dominated the 20th century university environment. Kisker (2007) aptly states, “Collaboration has become pivotal in ensuring quality post-secondary education” (p. 282).

Critical Thinking Skill Development

Service-learning experiences provide opportunities for students to become aware and engaged with issues within their communities but how do SL experiences support the development of critical thinking skills? First, the construction of knowledge and experience should be viewed as concepts that build upon each other. Slavkin (2003, p. 20) describes SL as a “brain-based” learning strategy or pedagogy.

A brain-based pedagogy is one which recognizes the nature of cognition, the functioning of the human brain and how one constructs knowledge as inter-related instead of separate areas. This ecosystem of thought and knowledge allows singular functions to be organized and performed by multiple neural systems. Neural systems continuously reorganize because of experiences and have the capacity to develop throughout a student’s life. These neural pathways for information are selected for use if students use them and the information has a purpose. Much like the brain and information pathways of the brain, Slavkin argues that the stronger the interactions between information and skills, the more likely “schema are to be organized and used for future use” (2003, p. 23). Students who are actively engaged and in charge of their learning are more likely to make use of the knowledge in the future.

In 1946, the National Training Laboratory developed the Learning Pyramid, which was based on Dale’s Cone of Learning. Dale’s Cone of Learning is based on different levels of

learning experiences ranging from active, experiential experiences to abstract learning experiences.

According to Dale's model, the base of the pyramid is characterized by concrete experiences, such as direct experiences (real-life experiences), contrived experiences (interactive models), and dramatic participation (role plays). The common theme among these levels is learners are learning by doing. The middle of the cone is slightly more abstract and is characterized by learners observing the learning experience. These middle levels of student learning are differentiated from the lower levels because there is no direct interaction in learning on the part of the students. The middle sections of the cone include learning experiences such as demonstrations, exhibits, films, and audio recordings. The peak of the cone is the most abstract area of learning, where the experiences are represented non-realistically by symbols, either visual or verbal (Roberts, 2011).

The Learning Pyramid is a very simplified version of Dale's Cone of Learning and serves as a visual representation of the positive correlation between the degree of active engagement or active learning used by instructors and the amount of subject matter that is retained by students (Permaul, 2009). As indicated by the pyramid, more information is retained by learning activities that engage students through active learning and reflection activities such as discussion, practice by doing and immediate use of learning. Service-learning could be included in all of these categories due to the different components involved in the development of SL activities.

Secondly, once subject matter has been retained and/or learned, participation in SL activities then allows students the opportunity to make meaning of content when the students are then allowed to critically reflect on the experience. For critical thinking to occur,

schema that has been developed and organized are used and tested to determine if the knowledge and beliefs are the same or need to be changed based on the experience (Krasny, 2020).

For students to learn from SL experiences, faculty must provide structured opportunities for students to reflect critically on their experiences. Ideally, reflection should take place before, during and after the learning experience. Reflection encourages students to form and test opinions, discuss actions and reactions, and formulate new learning based on their experiences (Merriam et al., 2007). Faculty use these processes for examining beliefs, goals, and practices, to gain new or deeper understandings that lead to actions that improve learning for students. Actions may involve changes in “behaviors, skills, attitudes or perspectives, within an individual, partner, small group or school” (Merriam & Brockett, 2007, p. 172).

Boud et al. (1985/2013) assert that reflection is a key stage in the learning experience. They describe the process as “returning to experience, attending to feelings, and re-evaluating the experience.” They believe that it is necessary to deal with emotions associated with past experiences to learn from them. Unresolved feelings such as anger, fear, humiliation and regret may serve as barriers to learning if they are not addressed as part of the learning process through reflection (Miller, 2000, p. 79).

Merriam et al. (2007, p. 174) also describes two types of reflection: reflection on action and reflection in action. Reflection on action involves reflecting or thinking about the event after it has happened. This type of reflection requires the learner to return to our experience, re-evaluate the experience, consider what we would do differently and then incorporate our decision into action. Reflection on action allows for continual change and growth because we are constantly evaluating and re-evaluating events or circumstances.

Reflection in action is the opposite of reflection on action. Reflection in action refers to responding or reacting to something while you are doing it. Reflection in action was popularized by Schon, who believed that reflection in action is triggered by surprise. Schon believed that reflection in action allows competent and experienced professionals to go beyond the routine application of facts and gives them the freedom to practice beyond normal practice (Merriam et al., 2007, p. 177).

Reflection is crucial to the development of critical thinking because reflection leads to a transformation or change of the individual's ideas, beliefs, or schema. Transformational learning is about change in the way we view ourselves and the world around us. Service alone does not guarantee that students will learn or that it will be effective. Service-learning activities should have structured reflective opportunities for students to think about the experience and what they have learned. Facilitated discussions with other students can provide opportunities for students to question their original beliefs, hear other perspectives, and then potentially formulate new ideas or learning (Honnet & Poulson, 1989). Both Experiential Learning theory and Transformational Learning theory emphasize the importance of self-reflection in the learning process.

Properly designed SL experiences which incorporate opportunities for critical reflection have the potential to be a powerful tool in creating experiences that allow for the development of critical thinking opportunities for our learners (Yousef et al., 2020).

Leadership Skill Development

In addition to increasing civic awareness and developing critical thinking skills, SL experiences have been utilized to foster the development of leadership skills in students. Institutions of higher education, business and industry recognize the need for leadership skills development. Business and industry have been plagued with scandals that have caused

many to question the moral character and leadership abilities of corporate leaders. Scandals involving the unethical conduct and/or poor leadership of individuals and their companies such as Ken Lay of Enron, Bernard Ebbers of Worldcom, Dennis Kozlowski of Tyco, Scott Thompson of Yahoo, and countless other examples have led to the increased scrutiny of and a call for accountability of business leaders and their actions.

The leaders of our institutions of higher education are held to the same high leadership standards as our business and industry partners. While higher education institutions have not traditionally been involved in multimillion-dollar scandals, today's educational institutions are now facing and will continue to face complex leadership dilemmas involving various issues such as free speech, hazing by campus organizations such as fraternities and sororities, racism, and sexual assault (Hart Research Associates, 2013).

Recent ethical dilemmas faced by college and university leadership, such as the Milo Yiannopoulos's free speech appearances leading to campus violence and riots at UC Berkeley, students challenging Harvard University's admission policies alleging the current policies favor certain races, college athletics and corruption, sex-abuse scandals, and diversity, equity and inclusivity are complex and ethically challenging situations today's educational leaders are facing that demand leaders who can communicate, think critically and solve complex problems (Matherly, 2023).

Developing students as ethical and competent leaders is not just the responsibility of one discipline or academic unit but the responsibility of everyone in higher education and business and industry (Awais 2023; Seemiller, 2016). The National Association for Colleges and Employers (NACE) identified seven competencies as essential for career readiness for college graduates, with leadership listed as a priority skill. The next three skills – teamwork or

team skills, communication skills and problem-solving skills – are considered attributes of leadership. An American Management Association (2013) survey indicated that 75% of the respondents believe the above-mentioned skills will become more critical in the next three to five years. Employers desire graduates who can lead when they are hired, contribute to productive teams, and critically think to make quality decisions (NACE, 2016).

Colleges and universities have also recognized the need for leadership development and education. Many colleges and universities have developed schools of leadership, majors and degrees in leadership, and many have created specialized leadership certificates at the graduate and undergraduate level (Leadership Schools, n.d.).

Service-learning advocates propose that leadership skill development can be enhanced through the incorporation of SL into leadership course curriculums by “providing opportunities for students to enhance their marketability by honing leadership and interpersonal skills while learning the value of citizenship behaviors” (Greenleaf & Goertzen, 2021; Lester, 2015, p. 281).

Leadership development opportunities can be built into any course or subject. Many courses naturally lend themselves to the incorporation of SL opportunities into the curricula, such as humanities, psychology, and sociology courses. The Liaison Committee on Medical Education has built SL into their accreditation standards as a necessary component for medical education. As part of the curricular content, medical faculty must incorporate SL experiences into the curriculum that address the following previously identified leadership skills: problem solving skills, cultural competence, communications, ethics, and inter-professional collaboration (Liaison Committee on Medical Education, 2015).

Much like their educational counterparts, business and industry have also recognized the value of SL in teaching leadership skill development and developing sustainable leadership skills

and behaviors. Leonard and Lang (2010) note that “40% of new leaders fail within 18 months of promotion or appointment” (p. 225). Due to the large percentage of leadership failure rates in large organizations, more business and industries are turning to action learning to train their corporate leaders. Agencies such as the US Department of Commerce, Boeing, the National Institutes of Health and the US Department of Agriculture all have used action learning to train and develop their emerging corporate leaders (Lang, 2010).

Jay Conger (1992) identified four approaches to leadership development and this framework has been utilized to develop leadership training programs. The four approaches are identified as the personal growth approach, the feedback approach, the conceptual understanding approach, and the skill building approach. Conger suggests that there are mechanisms within each approach that influence learning and leadership development. The personal growth aspect of leadership development ties most closely with service-learning due to the importance or emphasis placed on reflection. Referencing the works of Allen and Hartman, Lester (2015) also placed service-learning under personal growth due to its heavy emphasis on reflection but also emphasizes that service-learning experiences should be designed to incorporate all of Conger’s leadership development aspects to maximize the student leadership development experience.

Rhee and Sigler (2009) studied students in the Master of Science in Executive Leadership and Organizational Change program, which was designed to develop enlightened leaders who demonstrate outstanding and transformative leadership in their companies and communities. Service-learning opportunities were designed that focused on the development of social and emotional competencies, teamwork and communication. Reflective exercises revealed increased student awareness, increased emotional intelligence, increased intentions to engage in the

community, higher performing teams, increased awareness of learning from mistakes, and the perception of increased skills in leadership (Guthrie et al., 2022).

Referencing a study by the Ashridge Business School, the Academy of Business and Society, and schools for the United Nations Principles for Responsible Management Education, Gitsham noted that 76% of the chief executives and senior leaders thought that it was “important that senior leaders in their organizations had the mindset and the skills to lead change in a global changing context” (2012, p. 299).

Clearly, SL opportunities may be ideally suited to provide students learning experiences which help develop necessary leadership skills needed for entry into the workforce or allow individuals already working in a chosen profession to develop or strengthen skills and competencies needed to successfully lead their organizations (Awais, 2023).

Knowledge Acquisition

Numerous studies have explored the benefits of incorporating SL into academic courses and have shown positive correlation in the areas of academic performance, values, self-efficacy, leadership, civic engagement, etc... Referencing a longitudinal study by Astin et al. (2000), student participation in SL experiences resulted in significant positive outcomes in academic performance.

The most significant factors from SL experiences influencing academic outcomes were noted to be student preparation for SL participation, the opportunity for reflection, and subject-matter interest. Well-designed SL experiences prompted students to evaluate differing perspectives, which may lead to their ability to develop critical thinking skills and understand social issues (Felton & Clayton, 2011; Stefaniak, 2020).

Casile et al. (2011) note SL serves as a means for “improving critical thinking and developing independent adaptable individuals for a changing world” (p. 131). They found that SL also contributed to the development of problem-solving skills, critical thinking skills, data collection, data analysis and improved writing skills (Stefaniak, 2020). Taggart and Crisp (2011) indicated both positive and negative findings when reviewing GPA and exam grades and course grades when referencing work previously performed by Eyler and Giles.

Much of the current literature has linked SL to more indirect measures of academic performance. While these indirect factors are important learning outcomes, critics of SL argue that more studies are needed to link SL to mastery of course content. Felten and Clayton (2011) designed a research study utilizing two different experiential learning projects, research projects or SL projects, to determine which practice provided better course content mastery. Their results showed that students who participated in SL projects mastered course content better than students who completed research projects with an average score of 6.2 percentage points higher on an end of course content mastery survey. The researchers believed that students could better master content largely due to the application of information learned and experience.

The benefits of SL continue to extend far beyond the measurable academic performance of students in the classroom. Merriam et al. (2007) reference lifelong education regarding how current educational trends have shifted, with the emphasis moving from lifelong education to lifelong learning. With the recognition that learning occurs in various environments outside the classroom, the humanistic focus of life-long education has shifted somewhat to an economic focus as well. This change has been driven by the increased awareness of society of the need to develop skilled workers who can be competitive in the global marketplace.

The Association of American Colleges and Universities (AACU) conducted an online survey of 318 employers whose businesses employ at least 25 people and report that at least 25% or more of their new hires have either an associate or bachelor's degree. The report provided an analysis of priorities employers believe are necessary for college students to succeed in today's economy and highlighted changes in educational and assessment practices employers recommend strengthening student skills and employability. Key findings indicate that employers prioritize critical thinking, communication, and complex problem-solving skills over a student's major field of study when making hiring decisions (93% totally agree, 59% strongly agree) (Hart Research Associates, 2013, p. 4).

Employers also identified types of knowledge and skills as important considerations in the hiring process. Ethics, intercultural skills, capacity for professional development, community involvement, and global knowledge were identified as skills that are important when hiring candidates. Employers placed the most importance on ethics (96%), intercultural skills (96%), and capacity for professional development (94%), however, community involvement (71%) and global knowledge (55%) still ranked high (Curtindale et al., 2020; Hart Research Associates, 2013, pp. 6–7).

Regarding educational practices, there was broad agreement that students should have educational experiences that expose and teach about civic capacity, broaden their knowledge of the liberal arts and sciences and experience cultures outside the United States. Learning practices identified as having the potential to improve the educational process and help students succeed include participating in research and evidence based analysis, completing projects that demonstrates acquired knowledge and skills, internships or community-based field projects, collaborative research, hands on or direct experience with methods of science, and working

through ethical issues and debates to form their own judgments about the issues at stake (Early & Lasker 2017; Hart Research Associates, 2013, pp. 12–13). Service-learning experiences can clearly help students meet the goals of knowledge acquisition, increased civic awareness, and increased cultural awareness while in the classroom, as an employee of an organization/business, or as a member of the community (Salmon, et al., 2019; Yousef et al., 2020). With employers increasingly demanding competent graduates, SL experiences may provide students learning opportunities which develop the “social and human relation skills needed in the workplace by providing opportunities to put skills and attributes into practice” (Chan, 2012, p. 407).

Currently, our local and national economic, social, and political environments are tenuous in terms of recovery. Our world's uncertainty has led to dwindling resources for education, business and industry. It is during these tough economic times that partnerships become vitally important to education, business, and industry. We are now in an age that calls for community engagement at multiple levels (Prentice & Robinson, 2012, p. 246).

Educational institutions, business and industry, and our communities have historically operated independently of one another. In a time of shrinking resources, institutions must align with each other to thrive and succeed. Peter Senge (2006), founding chair of the Society of Organizational Learning, is quoted as saying:

The ultimate consequence of this fragmentation is the inability of Industrial Age institutions of all sorts - corporations, schools, and universities, public and non-profit organizations - to adapt to the realities of the present day. Especially in times of deep change, sustaining adaptive institutional responses requires better theory, method, and practical know-how. (p. 196)

Incorporating SL experiences into courses or curriculums creates opportunities for students, educational institutions, organizations, and business and industry to collaboratively address the social and civic issues facing our communities, allows students to build necessary skills for successful employment in the workforce and provides educational experiences that meets the needs of a multitude of learners across the educational, organizational and personal spectrum (Xiao et al., 2022).

Service-learning experiences help create opportunities that allow for students to achieve learning and faculty who desire to transition SL into online courses to be successful in creating engaged learning experiences. To make this transition from seated to online teaching, faculty must have confidence in their ability to transition SL into online courses. Using Bandura's concept of self-efficacy, Bandura believed if one has confidence in their ability to perform a task, there is a greater probability of being successful in said task. Self-efficacy comes from four sources: mastery experiences, social modeling, verbal persuasion, and psychological factors (Bandura, 1977). Mastery involves being successful in current attempts and this leads to success in future attempts. Social modeling describes observing others like yourself trying and completing tasks successfully. Other's success can motivate an individual to accomplish the same task. Verbal persuasion builds upon the concept of positive feedback from others as a motivating factor to perform a task. Finally, psychological factors refer to the emotions, physical reactions, or stress that could impact a person's belief in their ability to complete or perform a task (Ali, 2021).

Adapting SL experiences to the online environment will require faculty to think differently regarding SL course design. For faculty or their institutions to develop a successful plan for the implementation of SL into the online environment, it is important to understand the

different service-eLearning typologies, examine the best practices in online education, and examine barriers or challenges associated with technology adoption. Understanding these issues will allow stakeholders to better understand how to better guide and provide the types of support faculty may require in the online environment when approaching instructional design and service-eLearning.

Service-eLearning

Advances in educational technologies have forced educational reform and faculty who have previously utilized SL in traditional courses must now find ways to successfully transition SL into the online environment for their online students to reap the same benefits of learning through service. With more students taking online courses, SL experiences must be adapted to the online environment to remain relevant and viable (Compare & Albanesi, 2022; Stefaniak, 2020).

Waldner et al. (2012) describe service-eLearning as the “ideal marriage” of service and technology because it overcomes limitations of both Service-learning and online learning by freeing Service-learning from geographical limitations and increasing opportunities for student interaction in online courses (p. 126). As “an integrative pedagogy that engages learners through technology in civic inquiry, service, reflection, and action” (Dailey-Herbert et al., 2008, p. 1), other benefits of utilizing service-eLearning include increased access, the ability to engage populations, such as the disabled, those living in rural settings, and students who work or may have families who may not be able to participate in traditional SL opportunities, and the opportunity to conduct regional, national or global service projects (Faulconer, 2021; Salam, et al., 2019; Strait & Sauer, 2004; Waldner et al., 2010).

Service-eLearning experiences may also help compensate for the lack of interaction that often occurs in traditional online courses and may introduce motivation for e-Learning by allowing students to apply knowledge in a real-world setting. Engaging learning experiences may be useful to adult learners because they can draw on their life experiences when searching for solutions to real-world problems (Pacho, 2019; Salam, et al., 2019; Waldner et al., 2010).

Service-eLearning Typology

As higher education continues to transition to more fully online and hybrid course offerings, educators are challenged to develop online experiences that are engaging yet also provide the same types of workplace exposure and community engagement seen with traditional SL experiences in the traditional classroom. Creating engaging experiences may become even more challenging in the online environment when students may not be in the same location as the instructor or the institution they attend (Dailey-Herbert et al., 2008; Xiao et al., 2022).

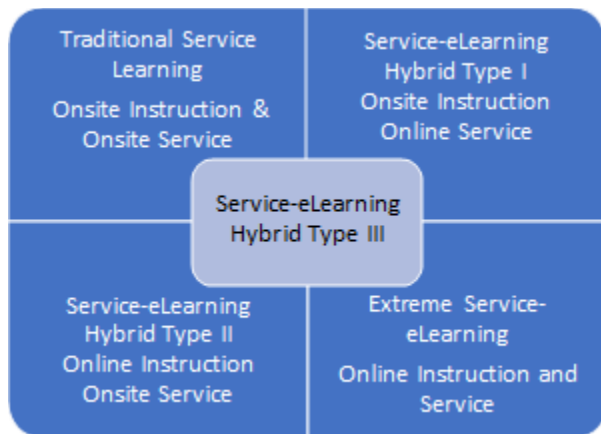
Unlike students who may have grown up with technology and are considered digital natives, faculty may struggle using technology or do not feel competent in their technology skills. Faculty who are not competent with technology or believe they lack the ability to learn new ways to use technology in teaching may be reluctant to transition SL into the online environment. Success of online teaching depends on faculty's willingness to use technology, their perception of their competence or ability and their intent to use technology (Ali 2021; Zhao & Zhao, 2021). Bandura suggested there are four main influences on self-efficacy. Those components are mastery experiences, vicarious experiences, emotional, physical, or psychological states, and verbal persuasion, with mastery being the most critical source of influence on self-efficacy. (Rumjaun & Narod, 2020). Given the unique challenges of teaching in online environments and how this impacts faculty acceptance of service-eLearning,

understanding the different types of service-eLearning, the benefits of each and their limitations is essential for educators to build successful and meaningful SL experiences (Awais, 2023; Bond et al., 2021).

Waldner et al. (2012) describes four types of service-eLearning currently utilized in online courses. Each type of service-eLearning is characterized by differing levels of online interaction, with each level having different course products, community partners and limitations (Faulconer, 2021). The figure below provides a graphic representation of the service-eLearning typologies, instructor interaction modality and the service component location.

Figure 1.3

Service-eLearning Typology



Note. Adapted from “E-Service-Learning: The Evolution of Service-Learning to Engage a Growing Online Student Population,” by L. S. Waldner, S. Y. McGorry, and M. Widener, 2012, *Journal of Higher Education Outreach and Engagement*, 16(2), p. 134 (<http://eric.ed.gov/?id=EJ975813>)

Hybrid Type I Service-eLearning. Most service-eLearning occurs in the Hybrid Type I format. This format of service-eLearning offers instruction completely online, with the service experience occurring fully on- site (Faulconer, 2021). An example of Hybrid Type 1 format is

described by Guthrie and McCracken (2010) in their examination of a social justice course taught at a small, public Midwestern university. The social justice course had been taught for four to five semesters online and examined community engagement from a social change framework and explored how leadership styles could impact positive social change.

Requirements of the course included the completion of individual student action plans, 60 community service hours performed at a local non-profit agency or organization, and participation in reflective journals, discussion boards and reflective essays. Students were also responsible for creating individual learning goals for the community service experience.

Overall course evaluation results indicated students felt they learned new concepts in relation to social justice, leadership, and civic engagement. One student reported:

I never really thought about leadership, social justice, and volunteerism as being interconnected. This class not only told us how they were connected, but we could then see it in our service sites. Once I knew how to think about these topics, I could look for them. Service, social justice and leadership is everywhere and is seen every day. I would say that is the biggest thing I learned from this class. (Guthrie & McCracken, 2010, para. 25)

Hybrid Type II Service-eLearning. Hybrid Type II service-eLearning is different from Type I in that Type II involves conducting the course work on-site with the service component being conducted fully online. Companies such as Kanbay International have utilized Hybrid Type II service-eLearning to train employees and produce a company product. Kanbay International determined leadership development of quality employees was critical to their continued success. Thirty-two international employees were chosen from across the world to attend the Kanbay Global Leadership Development Program (GLDP) in Chicago, Illinois. The

first week involved seminars and workshops that exposed them to action learning. Group members were then divided into teams determined by specialty. Each group was charged with developing a clear understanding of key business issues, an implementation plan, and an evaluation process. After one week, employees were sent back to their home location to engage with their employees and clients. Coaches were provided to the participants for input, resources, and support. Groups and their coaches met virtually to discuss challenges, strategize solutions, and revise their initiatives based on their progress. Participants reconvened at week 12 to present plans, receive input from leadership and reflect on leadership lessons learned. At week 18, group plans were finalized virtually, and implementation plans were put into place. Due to the success of this training model, Kanbay International continues to utilize Hybrid Type II service-eLearning for Global Leadership development for its employees (Waddill et al., 2010).

Hybrid Type III service-eLearning. For Hybrid Type III service-eLearning, instruction and service may both be online and onsite (Faulconer, 2021). Bemidji State University and the Minnesota Satellite and Technology Center partnered with several Minnesota Arts Centers and 12 community colleges to develop a blended technology, K-8 elementary education program for rural and urban students who could not attend a traditional campus-based teacher education program. The program was developed as a WebCT-enhanced teacher education preparation program to address the shortage of teachers not only in Minnesota, but across the United States. The Distributed Learning in Teacher Education (DLiTE) program featured weekend face-to-face classroom experiences twice a semester at three different locations, student selected teacher-mentors in the classroom setting, a WebCT online learning management system (LMS), and E-mentoring by faculty through the LMS, email, phone as needed (Strait & Sauer, 2004).

Type IV or Extreme Service-eLearning. Finally, Type IV or Extreme service-eLearning involves both the instruction and the service component being offered completely in the online environment (Compare & Albanesi, 2022; Faulconer, 2021). Examples of this type of service-eLearning include an online undergraduate marketing class in which students developed marketing materials such as brochures, fliers, a website, thank you letter templates and newspaper advertising for a Humane Society in Alabama (Waldner et al., 2012). Another example of Type IV service-eLearning involves Fire Service Administration students from a baccalaureate degree program. Students were responsible for working with volunteer fire departments across the United States to review departmental policy and procedure manuals. Students then made recommendations for policy/procedural updates, presented changes to their instructors for approval and presented the final products virtually to fire chiefs and the class as a capstone project (Hunter, 2007).

Understanding these different service-eLearning typologies is imperative for faculty to develop successful and meaningful learning experiences in the online environment. Faculty need to be aware of the differences associated with each type of typology because each type features different products, partners, and special limitations. In addition, service-eLearning has some unique limitations which may also impact the decision-making process when considering including service in online environments. Having a working understanding of best practices for service-eLearning and recognizing the limitations associated with online service can help guide faculty in designing meaningful service-eLearning experiences that support student learning of the course content, provide a beneficial service to the community partner, or create a useful product for the community partner (Zhao & Zhao, 2021).

The Increase in Online Education

Online education continues to grow, even in the face of declining overall enrollment in higher education. Allen and Seaman (2013) conducted a survey, with additional data from the National Center for Education Statistics' Integrated Postsecondary Education Data System (IPEDS), with the purpose of examining the nature and extent of online education. One component of the survey addressed the question of how many students are learning online. The data showed more students are taking online courses, with 2.85 million taking all courses online and 2.97 million students taking some courses online. Public institutions generated the largest group of online students, with 72.7% of undergraduate and 38.7% of graduate students. The overall number of students who do not take online courses has continued to drop from 434,236 in 2012-2013 to 390,815 from 2013 - 2014 (Allen et al., 2016, p. 4). Figuccio (2020) estimates that as of fall 2016, 31.6% of all higher education enrollments included students taking at least one online course.

Students who enroll in online courses are no longer considered a population that is amorphous. A survey of online students showed that they believed their education was worthwhile financially and a good investment of their time. They did not consider taking courses at a campus although there were institutions located nearby. These students were experienced in the online environment, with 44% of them taking online courses previously. These students chose to take online courses due to the flexibility they offer and the need to manage multiple responsibilities (Aslanian & Clinefelter, 2015).

According to 2008 data from the Community College Research Center (2013), ninety seven percent of community colleges offered online courses compared with 66% of all post-secondary institutions. Online education has been seen by many institutions as a means to

expand access to instruction for students and increase enrollment without having to build new physical structures (Meyer, 2014). As online education continues to grow and online students are becoming more experienced in the online realm, educational institutions continue to question what types of learning strategies can be utilized to better engage online students to give them a similar educational experience as their seated counterparts. To meet this growing demand, more instructors may be asked to teach in partial or fully online courses. Faculty who can address the challenges of online education will be needed to meet this ever-increasing demand (Keengwe & Kidd, 2010).

Challenges in Online Teaching and Learning

Current challenges facing educational institutions includes increasing competition for students, decreasing enrollment, increasing numbers of non-traditional students, and decreasing funding are driving many institutions to view technology as a solution to these pressing issues. College and university leaders often implement technology initiatives without gaining buy-in from faculty, students and community users which may result in resistance to incorporating technology into the classroom (Education Service Center Region 12, 2018). Referencing an early study by Lynch, Baltaci-Goctalay and Ocak (2006) noted that faculty use of technology continues to be a struggle. While 80% of colleges and universities make course management tools available to their faculty, only 20% of faculty use technology or available course management tools in their courses. Reid (2014) found that approximately 30% of faculty use technology daily for supporting instruction. Of this 30%, some faculty transitioned back to traditional course delivery methods.

Not only do faculty need to be proficient in technology, but they must also become more familiar with effective online teaching strategies. Crawford-Ferre and Wiest (2012) note that

many faculty have little training in pedagogy for online instruction and therefore may be less likely to teach in online courses. Because the principles of good practice in undergraduate education are similar regardless of the course environment, many educators make an erroneous assumption that the same traditional instructional design, grading procedures and teaching methods will also work well in the online environment. Once faculty realize the two teaching environments are quite different, they become frustrated and realize the need for extra training and support to enhance their skills (Keengwe & Kidd, 2010). This realization may lead faculty to either seek more training to be successful online or abandon their teaching efforts in online environments.

To better help faculty to make a successful transition from traditional classroom instruction to instruction in the online environment, faculty must be trained in use of the technology, new methods of course design, and instructors must be supported (Britt, 2015; Crawford-Ferre & Wiest, 2012; Kranzow, 2013; Leslie, 2019; Young & Bruce, 2011). When applying these same principles for online training to the development and incorporation of service-eLearning experiences, faculty must not only possess a solid foundation in online instructional methodology, understand course design and have institutional support, but also have a foundational understanding of service-eLearning as well.

Transitioning traditional service-learning experiences into the online environment will require at least the same (if not more) types of transitional support and instruction needed for online instruction for faculty to become proficient in creating meaningful, well-designed service-eLearning experiences.

Best Practices in Online Learning and Service-eLearning

When approaching best practices for service-eLearning, many of the previously established best practices identified with traditional learning experiences mirror best practices identified with online learning. Instructors who are willing to learn to blend SL, adult learning theory tenets and best practices in online or e-learning, bring together various aspects of learning to create active and engaging learning experiences that are not bound by physical or geographical limitations.

Chickering and Gamson (1987) identified seven practices for good practice in undergraduate education. The seven principles were developed as guidelines to improve teaching and learning for students, faculty, and administrators. These principles were based on activity, cooperation, diversity, expectations, interaction, and responsibility. Chickering and Gamson recognized that addressing how teachers taught was as important as the content of the course and content and pedagogy were intertwined in complex ways. The seven principles of good practice include: 1) Contact between students and faculty, 2) Reciprocity and cooperation between students, 3) Using active learning technologies, 4) Giving prompt feedback, 5) Emphasizing time on task, 6) Communicating high expectations, and 7) Respecting diverse talents and ways of learning (Chickering & Ehrmann, 1996, p. 2).

Referencing these same principles, Meyer (2014) posits that the principles for online engagement are not that different from the same principles that are used for face-to-face courses. Chickering and Ehrmann (1996) also further developed the original seven principles to include new ways of communication and information technologies as a lever for learning to occur. They believed any instructional strategy could be supported by technology but for the strategy to be successful, the technology must be employed in ways that are consistent with the

original seven principles (Chickering & Ehrmann, 1996). By basing their work on the original principles, they acknowledged eLearning as a pedagogy and not merely technology (Dailey-Herbert et al., 2008).

Much like Chickering and Ehrmann's (1996) principles for integrating technology and pedagogy for online engagement, Howard's (1993) Principles of Good Practice for Service-Learning Pedagogy share similar principles for integrating community service into coursework while maintaining academic rigor. Howard emphasized the importance of establishing clear learning objectives, developing student's readiness to learn from service or community contexts, establishing criteria for the selection of service placements, preparing students for the learning experience, minimizing the distinction between the community learning role and the classroom learning role, and "re-norming" the teaching-learning process to include instructors, community partners and students alike (Early & Lasker, 2017; Howard, 1993). Following these principles will help faculty ensure the teaching-learning process will be consistent with the civic orientation of service-learning.

Tenets of adult learning theory align quite well with the principles of undergraduate education, online education, and service-eLearning. Referencing an article by Campbell, Keengwe and Kidd (2010) note the emphasis of online learning includes the "development of metacognition as well as reflective and collaborative learning" (p. 2). Knowles' Adult Learning Theory suggests adults are self-motivated learners, center learning around their life experiences, bring vastly different life experiences to the table, and are self-directed learners who value mutual inquiry in lieu of the transmission of knowledge. Online learning strategies such as "an independent or online classroom study; a socially networked study; theoretical or applied activities; recorded discussions or lectures; discussion boards; and selection of their own

activities” allow adult learners to actively share their experiences with others and be actively engaged in the learning process in the online environment (Britt, 2015, p. 400).

A transformative pedagogy is one that “encourages students to critically examine their assumptions, grapple with social issues, and engage in social action” (Meyers, 2008, p. 219). Utilizing Mezirow’s Transformational Learning Theory, online learning and service-eLearning may be considered transformational for adult learners when learners are actively engaged in service, encouraged to be critically reflective of their beliefs, are provided a safe environment to discuss differing perspectives and opinions, are provided guidance as they explore, expand, and validate new views and or beliefs, and are supported as they develop new schemas (Hoskins, 2013).

Dewey emphasized the importance of experience and interaction in the learning process. Kolb took the importance of experience one step further and described the learning process as a “process whereby concepts are derived from and continually modified by experience” (Baasanjav, 2013, p. 576). When including reflection and abstraction with experience to create new meanings, Baasanjav believed the learning process is consistent with Bloom’s taxonomy because evaluation and analysis are ranked higher than learning from direct experience only.

The best practices of online learning, service-learning and the adult learning theory tenets described above serve as a general framework for developing successful service-eLearning experiences which emphasize active learning, communication, collaboration between all parties (students, faculty and community partners), and a decentralized faculty role that is common to both online learning, adult learning, and service-eLearning. However, successfully blending service and online learning is more involved than simply drawing from the best practices of each and technology alone does not enhance online pedagogy.

The real challenge for faculty desiring to blend online learning and service-learning is to develop fluency in teaching and learning with technology (Keengwe & Kidd, 2010; Leslie, 2019). Faculty who are willing to think differently about teaching and learning, learn and strategically use technology, and participate in professional development which emphasizes course design (content) can promote student engagement on multiple levels in the online environment (Fish & Wickersham, 2009; Waldner et al., 2012). Grant and Thornton (2007) noted three themes that could serve as a bridge for instructors who teach traditional face-to-face courses but desire to transition to online teaching: adequate technology training, course design and faculty-student interaction.

Technology Training. To maximize successful implementation of service-eLearning, technology training for everyone involved (faculty, students, community partners and the instructional design team) is imperative. Like students, faculty come with varying degrees of online experience and may also require training in not only use of the technology but also how to best incorporate SL into online courses. General trends noted among faculty regarding new ways of teaching and learning is that many faculty lack confidence in their ability to think broadly with technology, do not use computers extensively outside of school, and if they do feel comfortable in their computer skills, they are uncertain about how to use technology in their teaching (Compare & Albanesi, 2022; Jacobsen et al., 2002).

Crawford-Ferre and Wiest (2012) note most instructors new to online instruction have little to no training or preparation to this delivery mode and need support beyond training in the pedagogy of online instruction. Other faculty have expressed concerns regarding needing additional technical assistance, support, and training for developing instructional materials,

developing interactive online experiences, and applying technologies to create quality courses (Keengwe & Kidd, 2010).

When adopting new models of course delivery (versus traditional delivery), educational institutions must be open to addressing the needs of faculty who will be designing and delivering learning in new or different ways. Faculty will need support as they redesign courses, while also learning and managing online learning environments that will have students who may also be adjusting to a new learning environment (McDonald et al., 2014). Professional development (PD) becomes crucial when adopting technology; however, many PD courses tend to focus on how to use the technology and not necessarily on effective pedagogical practices (Donovan & Green, 2011; Leary et al., 2020; Shaha & Ellsworth, 2013).

Another issue complicating adequate professional development is the hiring and utilization of more adjunct faculty. Many adjunct faculty, especially in the community college setting, may be content experts but often have little to no training in pedagogy or instructional technology and are also less likely to receive professional development training (Reid, 2014; Schwier & Seaton, 2014). Referencing a report by Lederman and Jack, Reid noted that “24.3% of college and university presidents were unsure of their ability to provide appropriate professional development to junior professors” (2014, p. 391). Institutions must be willing to invest adequate time, energy and resources into determining the appropriate types of PD needed for online faculty involving technology and pedagogical training, provide adequate access to technical support and be willing to provide the necessary resources for PD training to be available to all full-time and part-time faculty (Education Service Center Region 12, 2018).

Like faculty, students also present with varying degrees of online experience and may also require training in the use of the technology. While students have backgrounds in using

forms of technologies, most do not have backgrounds in using library databases, learning management systems such as Blackboard, smartboards, and/or other instructional technologies. Students unfamiliar with the technology and innovative approaches to teaching and learning may become frustrated (Reid, 2014).

While technology training for faculty and students is important, technology training for community partners is also imperative in creating successful service-eLearning experiences. It is integral for faculty to assess the community partner technology capacity prior to starting a service-eLearning project. Service-eLearning may be complicated if the community partner and the student use different software or hardware. Community partners must be open to utilizing technology, trained in the technology (if needed) and the technology must be tested for reliability prior to any sessions (Waldner et al., 2012). Having compatible systems that are compatible with each other minimizes frustrations of all parties involved and helps ensure a positive service-eLearning experience for everyone.

Course Design. Understanding the differences between traditional and online instruction will give faculty the capability to design more effective courses and help faculty focus more on course delivery to create courses that better engage and challenge students. The nature of online instruction and the incorporation of SL experiences should cause faculty to rethink the nature of course content, their role in the course, and the needs and requirements of their students (Compare & Albanesi, 2022; Keengwe & Kidd, 2010). Unlike the traditional lecture-based model of learning, online learning utilizes digital resources to drive engagement, participation, and critical thinking (Education Service Center Region 12, 2018).

To decrease frustration and improve student success in online courses, course presentation is an important consideration. The learning management system (LMS) should be

user friendly, software should appeal to learners, and the online content should consist of high-quality graphics, images, electronic links, and video streaming (Fish & Wickersham, 2009).

Because service-eLearning is a blend of SL and online teaching, Strait and Sauer (2004) recommend that instructors become proficient in online instruction before incorporating SL into an online course. Waldner et al. (2012) notes that new online instructors should be mindful in choosing which courses to incorporate service into and recommends introductory courses be avoided to maximize success.

When designing online learning and service-eLearning experiences, faculty should be aware of or understand the components of setting the stage for learning and then what will be required in managing the learning process. Once the major components of the course are designed (course description, learning objectives, competencies, evaluation criteria, and teaching strategies), faculty must then face the challenge of how best to teach the content in an online format (Keengwee & Kidd, 2010; Morales et al., 2021).

Shifting from instructor focused teaching to a more student-centered learning experience involves creating content that increases engagement between all parties. Authentic learning occurs when students can be engaged in addressing real world problems and finding solutions (Britt, 2015). Engagement is considered more than communication between students, faculty and the community members and can be accomplished in a variety of methods such as case studies, discussion boards that pose questions around social issues, role playing, listening to audio-streaming diaries, and group projects (Britt, 2015; Meyers, 2008; Reid, 2014; Young & Bruce 2011). Incorporating service-eLearning experiences into online courses is one method instructors can use to increase student engagement and create course content that can be considered transformational.

Course Interaction. Successful technology and technology training is a cornerstone for any type of online learning, however meaningful interaction is key for learning to occur. Learning through interaction with others is grounded in the theory of constructivism which assumes that learning occurs because students develop understanding by participating in “meaningful, shared discourse” with others that can occur through reflection, critical thinking, dialogue, feedback, questioning, or real-world problem solving (Crawford-Fierre & Wiest, 2012, p. 12; Pritchard & Woollard, 2010). Grant and Thornton (2007) found dialogue and discussion that occurs in a constructivist atmosphere enhances learning and supports critical thinking when student’s everyday life experiences are utilized.

Principle one of good practices in undergraduate education encourages contact between students and faculty (Chickering & Gamson, 1987). Learner isolation has been identified as a challenge that must be overcome in online learning environments. Interconnectivity may be achieved through meaningful communication among course participants and encourages learning. Synchronous learning technologies, such as Wimba classroom, allow students and teachers the opportunity to communicate in real time using video conferencing, screen sharing, virtual groups, and chat sessions. Environments that allow for authentic interaction among participants helps to create bonds, builds trust, and helps create a sense of community for learners (Baasanjav, 2013).

Online teaching not only requires faculty to communicate differently than in seated courses and faculty interaction/communication must be prompt, relevant, continuous, and occur at different times throughout the course (Chickering & Ehrmann, 1996; Fish & Wickersham, 2009). Online instructors must maintain a “visible” social presence and teaching presence. Establishing an online presence helps to solidify connectivity with students (Grant & Thornton,

2013, p. 350). Communication expectations for students, community partners and faculty members should be established initially and emphasized throughout the course (Waldner et al., 2012).

Interactivity/interconnectivity between students and students and their instructors is imperative for learning to occur and follows good undergraduate learning practice 3: Uses active learning techniques. Students learn by talking about what they are learning, writing reflectively, relating their learning to past experiences, and applying what they learn to their everyday lives. Forming student groups within service-eLearning experiences or any online course can encourage interaction and active participation (Waldner et al., 2012). Assignments that encourage reflection and require students to relate content to their personal lives help motivate student interest and encourage student control of the learning environment (Grant & Thornton, 2007; Morales et al., 2021).

Regardless of the subject matter, research has shown that students desire to be effectively engaged in online courses (Jaggars, 2014). Research on campus-based education performed by theorists such as Tinto, Astin, and Bean and Metzner, found evidence that student engagement in their collegiate surroundings encouraged students to stay enrolled and complete their degrees (Meyer, 2014). Numerous studies of factors that contribute to student success in the online environment acknowledge student engagement as a primary factor contributing to helping students learn, stay enrolled and finish a degree (Britt, 2015; Cole et al., 2014; Hew, 2016; Jaggars, 2014; Keengwe & Kidd, 2010; Meyer, 2014).

Integrating active learning assignments into online courses, such as service-eLearning experiences, empowers students to be actively engaged in their learning and may also improve their odds of successfully completing their degrees.

Service-eLearning Limitations

Although service-eLearning has numerous benefits, there are also unique limitations to incorporating service into online courses. Without an understanding of the barriers to adoption, institutions and their faculty will be hard pressed to develop strategies for successful adoption of service-eLearning. The effective incorporation of online pedagogical practices, such as service-eLearning, requires a thoughtful design that considers the course content, teaching and learning strategies, and technologically adept instructors. Most instructors do not have the appropriate background to be successful in undertaking this challenge (Reid, 2014). Waldner et al. (2012) describe technology issues, sustaining communication and interaction, and increased instructor workload, as the three most challenging limitations for the incorporation of SL into the online environment.

Technology. Technology issues can be considered a broad category as this may refer to issues such as access, hardware and software reliability, technical support, technology training, etc... that may be experienced by the educational institution, the student, or the community partner. Malvey et al. (2006) identifies hardware and software reliability as the most significant limitation in service-eLearning and noted “the technology that supports E-service-learning also represents the biggest pitfall. Machines malfunction, and when the technology goes awry in an e-environment, the effect is exponential” (p. 192). Common issues experienced may include technical issues such as sound issues such as feedback during live teleconference sessions, chat ware freezing during chat sessions, poor camera quality affecting videoconference abilities, and lack of compatible software (Malvey et al., 2006). Access to technical support is imperative for any pedagogy that relies on technology for implementation.

Another issue with technology deals with the aspect of incompatible hardware or software. Service-eLearning relies heavily upon the student, institution, and the community partner to be able to interface appropriately. This may become complicated if each of the parties involved utilize different software or hardware (Waldner et al., 2012).

Access to technology continues to be an issue in poor and rural areas. The advent of sophisticated technologies contributes to what is known as the digital divide. The digital divide is a term that refers to the gap between demographics and regions that have access to modern information and communications technology, and those that do not or have restricted access. It may be challenging for service-eLearning to overcome the digital divide regardless of the user's level of connectivity (Waddill et al., 2010). Another type of digital divide describes the difference between what students know how to do regarding technology and what they are allowed to do while in the classroom (Jacobsen et al., 2002).

Finally, inadequate training in the technology being used to deliver the course and inadequate service-eLearning training for all users (faculty, students, and community partners) may be a limitation of service-eLearning (Waldner et al., 2012). Most instructors who are new to online teaching receive little or no training in online pedagogy. Not only do instructors need online pedagogy training, but instructors should also receive access and training in the appropriate technologies being utilized in course delivery. They should be trained in the functionality of the learning management system being used and how to access help with issues or problems (Becnel & Moeller, 2017; Crawford-Ferre & Wiest, 2012).

Communication. Creating meaningful communication and interaction is challenging in the online environment. Sustaining communication and interaction (creating a sense of community) among all participants is seen as a best practice but also a limitation or service-

eLearning. Navigation within the course or the learning management system does not constitute interaction and does not help ensure student motivation and cognitive engagement (Kranzow, 2013). Online student communication and collaboration that helps provide opportunities for meaningful and personal engagement may increase persistence rates and enhance the quality of student learning (Meyers, 2008; Young & Bruce, 2011). Students who learn the most from their online courses have instructors who provide a structured and comfortable classroom environment that involves the participation of everyone in the course (Young, 2006). Interaction in online courses is challenging at best, however, instructors must not lose sight of the importance of interaction and building a sense of community online (Becner & Moeller, 2017; Ritter et al., 2010).

Increased Workload. The lack of proficiency in the online environment leads most instructors to grossly underestimate the amount of work required to successfully develop an online course and this same logic may be applied to incorporating SL activities into the online environment. When examining barriers to adoption of instructional technologies, many faculty were not aware of how much work it took, and the time involved to develop an online course (Reid, 2014).

Online instructors reported that online courses take more time to teach than face to face courses. Waldner and Hunter (2008) reported that service-eLearning courses took approximately 25% more time to develop compared to a traditional SL course. Because of the increased time requirements associated with online courses, additional support may be required. To overcome this obstacle, additional support for faculty who desire to incorporate service-eLearning may come in the form of reduced teaching loads and utilization of teaching assistants (Crawford-Ferre & Wiest, 2010; Major, 2010; Reid, 2014).

Faculty learning new pedagogies and modern technology may need more time than is traditionally needed for the development of face-to-face courses. Increased communication with students and creating a learner centered environment requires an engaged and active facilitator (Keengwe & Kidd, 2010). Additional duties such as grading, coordinating with community partners, arranging logistics and supervising the service course product and product delivery can require more time and effort by the instructor (Baltaci-Goktalay & Ocak, 2006; Reid, 2014; Waldner et al., 2012).

Service-eLearning holds the potential to transform service and learning by removing geographical constraints and creating engaging opportunities for student learning in the online environment. Advancements in technology have created tremendous opportunities for faculty to move teaching and learning beyond traditional classroom walls. Jacobsen et al. (2002) described changes in teaching and technology as they pertain to learners and how we as faculty should not be deliverers of information but instead creators of active learning experiences. They note “we no longer live in a world in which information is scarce, and the teacher’s role is to hand deliver content to children. The old certainties of a world defined by four classroom walls and impermeable boundaries have disappeared forever, replaced by global interdependencies and complex systems that require flexibility, responsiveness, and imagination (Jacobsen et al., 2002, p. 364).

Best practices for service-eLearning can also be considered limitations, however, recognizing and understanding these limitations allow faculty, administrators, and community partners to work together to design learning experiences that can prove beneficial to all served. To create quality online learning experiences, including service-eLearning experiences, there must be a shift in how institutions and faculty approach online learning. Institutions must be

willing to provide faculty with the resources and support needed to develop successful online learning environments and faculty must be open to learning with technology and shift their thinking regarding course design. It is critical for faculty to understand not only the technology used in online learning environments, but also understand the need to transform their current pedagogical practices to meet the needs of online students and create meaningful service-eLearning experiences. This is the future of service-eLearning.

Chapter Summary

This literature review consists of five sections. Section one considers the historical context of higher education, and the role SL plays in relationship to the goals of higher education institutions, which includes educating individuals to become better citizens and increase their civic awareness. Historical context is important because it provides awareness of factors that have influenced and shaped the utilization of SL as a teaching strategy in higher education institutions.

Section two discusses the differences between how adults learn (androgogy) and how children learn (pedagogy). Seminal works of adult learning theorists such as Dewey, Knowles, Kolb, and Mezirow are examined, the characteristics of each adult learning theory are discussed, and the relationships between SL experiences and adult learning are compared.

Section three provided an overview of SL to include a discussion of the components of a SL curriculum and the benefits of SL to the students, the educational institution and the community.

Section four defines service-eLearning and discusses the categorization of different degrees or types of service-eLearning currently in practice today. This section is of particular importance because having a foundational understanding of service-eLearning typologies

ensures faculty who are interested in incorporating service-eLearning into online courses have a template or roadmap to develop service-eLearning experiences which best fits their course, provides positive learning experiences for students, positive teaching experiences for instructors, and benefits the college and the community served.

Finally, section five examines the current shift of educational institutions to provide more online offerings and the potential impact on SL experiences. It is important to provide practitioners context on how the shift from seated course offerings to more online course offerings may be contributing to a decline in SL opportunities in online environments. As more courses shift to online formats, understanding best online teaching pedagogies, such as service-learning, that support increased student engagement, civic awareness, communication, and knowledge acquisition are important in creating engaging online courses.

CHAPTER 3: METHODOLOGY

Benefits of incorporating service into online courses, such as increased civic awareness, increased understanding of concepts, increased sense of community, increased critical thinking through reflection, leadership development and contextualization of course content have been well documented throughout the literature. Despite these benefits, faculty who may have previously utilized SL in seated courses and understand the value of SL to students and the community may still be reluctant to transition SL experiences into their online courses (Dailey-Herbert et al., 2008).

This research was to determine what types of factors may influence or hinder faculty when considering incorporating SL experiences into online courses. Identification of these factors could provide institutional decision makers with data to help guide them in determining what specific types of professional development are needed and define the levels of technical and institutional support needed for faculty wishing to incorporate SL experiences into the online environment. The study investigated the following questions:

1. What variables do faculty identify as barriers to the implementation of service-eLearning in online courses?
2. What variables do faculty believe are associated with facilitating the implementation of service-eLearning in online courses?
3. What is the relationship of perceived ease of use, perceived usefulness, subjective norm, self-efficacy, institutional factors, and intent to use to the incorporation of service-learning into online courses?

Methods

Research Design

To address the research questions in this study, a descriptive survey research design was used. An online, self-administered questionnaire was distributed to faculty teaching in the North Carolina Community College system. The data were used to describe the study participants' demographic characteristics, determine experience with service-learning, and examine perceived barriers and facilitators to implementation of service-eLearning. In addition, correlation was used to determine the relationship of perceived ease of use, perceived usefulness, subjective norm, self-efficacy, institutional factors and intent to use service-eLearning in online courses.

Positionality Statement

With the technological transformation of education, colleges and universities must evolve from “lecture-based learning” and move more toward “problem-based learning” methods that actively engage students (Jenson, 2019). Along with technological advances in education, Covid-19 forced educational institutions to emergently transition to online learning. This researcher believes we will continue to see a shift to more online course offerings in the future as technology continues to impact the field of education.

As a prior faculty member who valued service-learning and utilized service-learning experiences in seated courses, I understand the work, time, and resources needed to create successful learning opportunities that allow students to apply knowledge learned in the classroom, critically think, and reflect on learning. Now as an administrator working at an institution that values service-learning, understanding how to successfully transition service-learning into online learning environments and supporting those efforts is important as we consider how to grow service-learning at our community college. The hope is that information

gleaned from this research study will help lay foundational groundwork for my institution to develop a sound plan to advance service-eLearning.

Participants and Sample Selection

The target population of this study was curriculum faculty currently employed full-time or part-time in the NC Community College System (North Carolina Community College System). The NCCCS is an open-access educational system comprising 58 community colleges, serving 100 counties in North Carolina. The mission of the NCCCS is to “open the door to high-quality, accessible educational opportunities that minimize barriers to post-secondary education, maximize student success, develop a globally and multi-culturally competent workforce, and improve the lives and well-being of individuals through increased access to high quality educational opportunities” (NC Community Colleges, 2023). NC Community Colleges (2023) offer a variety of education, training and retraining for the workforce including basic skills and literacy education, occupational and pre-baccalaureate programs. Individuals may earn industry recognized workforce credentials, certificates, diplomas or associate degrees based on their courses or program of study.

The NCCCS Office was contacted via email to request the number of FT and PT community college faculty to determine population size, however, the NCCCS Office did not track this data. Because there is not a direct method to identify SL faculty with NC community colleges, the researcher determined that a multi-stage sampling procedure would best serve the purpose of identifying individuals to survey.

North Carolina community colleges were identified by accessing the NC Community College System office website (www.nccommunitycolleges.edu) and a listing of the 58 community colleges was found under the *Find a College* tab on the website. An email was sent

to the NCCC system office via the Contact Us menu on the website (www.nccommunitycolleges.edu) requesting access to the most current Chief Academic Officer (CAO) list-serve to identify primary contacts for each NC community college. The NCCCS office provided a current CAO contact list to the researcher. The CAO's from each of the 58 NC community colleges were contacted via a gatekeeper email asking permission to conduct research at their institution (See Appendix A). If the CAO responded "yes" to the request, a faculty recruitment letter containing a link to the survey was sent to the CAO. The CAO was then asked to disseminate the faculty recruitment letter to all FT and PT curriculum faculty at their institution (See Appendix B). CAOs that responded "no" or did not respond to the initial email request did not receive a faculty recruitment letter. The researcher received requests to participate in institutional IRB reviews from nine community colleges. These requests had to be completed and approved by the college IRB committee before surveys could be administered to their faculty. All nine requests were approved as submitted.

The researcher received five responses from community college CAO's who were not willing to disseminate the survey to their faculty. The researcher received no response from ten community colleges. As such, 43 community colleges agreed to participate in this research study.

Step two of the data gathering process involved the dissemination of the faculty participation email by the CAOs who granted permission to conduct the research at their institution. The email contained an introduction to the research topic, the study's purpose, and instructions on disseminating the eService-Learning survey tool to all FT and PT curriculum faculty. The faculty participation letter contained a Qualtrics survey link which took the participating faculty to the survey tool.

Instrumentation

Previous studies and research on technology adoption and pedagogical use of technology have shown that successful use of technology is dependent upon faculty's attitudes and acceptance of technology. The survey tool developed for this dissertation was developed from a previously utilized questionnaire designed by Yuen and Ma to examine faculty acceptance and attitudes toward online learning platforms. Yuen and Ma acknowledge that a "digital mindset" is required in education, but individuals differ in their attitudes and abilities to deal with technology and integration into the classroom (2008, p. 230). The TAM is the most accepted or adopted theoretical framework used to examine technology acceptance or adoption and has been validated empirically (Venkatesh, 1996; Venkatesh & Davis, 2000). However, the TAM only measured the factors of perceived ease of use and perceived usefulness. Legris et al. (2002) noted that while the TAM is a useful model, a broader model that considers variables that are related to human and social change processes and to the adoption of an innovation model should be used if we are to gain a more complete explanation of user acceptance of technology.

Yuen and Ma built upon the original constructs of the TAM, perceived usefulness and perceived ease of use, but to better understand human/social and institutional constructs that may also help more fully explain adoption of technology, the factors of computer self-efficacy, intent to use and subjective norm were also included in their original study. The researchers assessed the convergent and discriminant validity using principal component analysis for five components. The five components were computer perceived ease of use, perceived usefulness, subjective norm, self-efficacy, and intent to use. Structural equation modeling was performed as well. Fit indices for the model were considered and overall, it was concluded that the model was reliable and valid (Yuen & Ma, 2008).

When developing a survey tool to assess SL adoption in online environments, the researcher adapted the prior validated Yuen and Ma Teacher Acceptance of e-learning Technology survey (Appendix C). The researcher emailed Mr. Yuen to request permission to use the survey tool on two separate occasions but received no response to the request (Appendix D).

The original survey language was revised for the targeted population and included an eService-Learning context. The survey included the original five factors from Yuen and Ma's study (perceived ease of use, perceived usefulness, subjective norm, self-efficacy, and intent to use) but also included a sixth factor, institutional factors (IF), developed by the researcher. The component of IF was identified from scholarly research as discussed in the literature review. Institutional factors previously discussed such as technology, process, and administration describe the internal and external resources that are so critical to the successful adoption of technology but are often overlooked in the planning and development process when innovative technologies, software or new instructional pedagogies are being considered (Aypay et al., 2012; Buchanan et al., 2013; McDonald et al., 2014; Reid, 2014).

The survey tool consisted of two parts. The survey's introduction included a description of its purpose, risk and benefits, right to withdraw, confidentiality, privacy and data management, and informed consent of the participant. If the participant gave informed consent, they were then directed to the ten questions that provided descriptive data of the faculty. The descriptive questions addressed information such as age, gender, ethnicity, years' teaching experience, job status, job title, online teaching experience, service-learning experience, area of instruction and institution size. The three remaining questions determined the level of online experience of the faculty, the capacity at which service-learning is currently utilized by these faculty, and their level of interest in incorporating service-learning in online courses if they did

not currently do so. If the participant indicated they were not interested in incorporating service-learning into their online courses, skip logic directed them to the end of the survey. If the participants did indicate any level of interest (somewhat interested, interested, or very interested) in incorporating SL into online courses, they were then directed to the second part of the survey.

The second part of the survey was comprised of 22 questions addressing each of the six primary components used to assess factors potentially impacting the incorporation of service-learning into online courses. The survey was designed to include two items for intention to use, three items for perceived usefulness, four items for perceived ease of use, three items for subjective norm, five items for self-efficacy, and five items for institutional factors. The items for each of the six components, along with the original sources of reference, are listed in Appendix E. Each item in section two will be measured on a 7-point Likert scale, with the following ratings: (7) Strongly Agree, (6) Agree, (5) Somewhat agree, (4) Neither, (3) Somewhat Disagree, (2) Disagree and (1) Strongly Disagree.

Procedures

Data collection for this survey was a two-step process. Before data collection began, an IRB application was completed and submitted for approval from the Institutional Review Board (IRB) at NC State University. The IRB application included a description of the study purpose, design, methods, and procedures; investigator information; duration of the study and duration of participation; data access and security plan, description of how confidentiality will be protected and maintained, and informed consent. Participation in the research study was voluntary and participants could withdraw at any time. Raw data was stored on a password protected computer in a locked office, with access to raw data restricted to the researcher and dissertation committee. Documentation of the IRB application is in Appendix F.

Data Collection

Data collection occurred in fall 2022. Faculty participation emails containing a link to the eService-learning survey were administered to FT and PT community college faculty by each institution CAO who had given permission to conduct research at their institution. The researcher waited three weeks after sending the faculty recruitment email, containing the survey link, to the participating institution CAO's. After three weeks, the second contact was a thank you note sent via email encouraging those who may have not sent the eService-learning survey to their faculty to consider sending it. After six weeks, the survey was closed, and the results were collected.

Data Analysis

Data were collected using the Qualtrics survey tool and imported into SPSS 28.0 data analyses. Data were screened for outliers, linearity, univariate and bivariate normality, and to check assumptions for inferential statistical tests. Descriptive statistics were used to analyze and report frequency and percentages of the responses for participant demographics. Means and standard deviations were used to analyze and report measurement item descriptive statistics. Spearman rank order correlation was performed to determine the relationship between the variables perceived ease of use, perceived usefulness, subjective norm, self-efficacy, institutional factors, and intent to use. Alpha level for statistical significance was $p < .05$.

Ethical considerations

The researcher anticipated that the proposed research study posed no more than minimal risk that participants would encounter in their daily lives. No deception was involved, and participation was voluntary. Participants could withdrawal from the study at any time. The participants were informed that their responses are strictly anonymous and could not be linked to

them. (Dillman, 2007). The purpose and extent of the research study was explained prior to participants giving consent to participate. IRB approval was obtained prior to collecting data.

Data was pooled and reported in aggregate form with no individual identified in the reporting data. Access to the data was restricted to the researcher and dissertation committee. The raw data was secured on a password-protected computer located in a locked office.

Chapter Summary

The purpose of this study was to identify the factors faculty perceived as facilitating the incorporation of SL into online courses or a barrier to the incorporation of SL into online courses. The factors or variables used in this study were perceived ease of use, perceived usefulness, subjective norm, self-efficacy, institutional factors, and intent to use. The final research question addressed the correlation of perceived ease of use, perceived usefulness, subjective norm, self-efficacy, institutional factors, and intent to use with the incorporation of SL into online courses. Participants were full-time and part-time faculty employed in the North Carolina Community College System.

A correlation analysis research method was used to obtain data for this research study. The Service-eLearning survey instrument was administered to obtain demographic data and data for the variables of perceived ease of use, perceived usefulness, self-efficacy, subjective norm, institutional factors, and intention to use. The survey was administered via Qualtrics. Data analysis procedures relevant to each question were used to describe the data and determine statistical significance. Chapter four describes the data analysis procedures and presents the results in the form of narrative text and tables where appropriate.

CHAPTER 4: RESULTS

As stated in Chapter 1, the study reported here examined in detail the factors which faculty perceived as either facilitators or barriers to implementing service-eLearning in online environments. This chapter is organized by three specific research questions posed in Chapter 1. Participant demographic information is presented first and followed by the first research questions assessing the current level of service-eLearning being conducted by faculty participating in this study. Next, questions one and two address the factors that faculty identify as barriers and facilitators to implementation of service-eLearning into online classes. Finally, question three examines the relationship between perceived ease of use, perceived usefulness, subjective norm, self-efficacy, intent to use, and institutional factors influencing the incorporation of service-eLearning into online courses.

Demographics

Of the 47 participants who responded to the survey, 46 completed all the items regarding the demographic information. Most of the participants were White (85.1%), ranged between 40-50 years of age (36.2%), had full-time status (85.1%), had 10 or more years of teaching experience (63.9%), and worked in community colleges with enrollments of less than 3000 students (57.4%). Demographic characteristics, frequencies and percentages are presented in Tables 4.1- 4.4.

Table 4.1*Participant Demographic Characteristics: Age*

Demographic Characteristics	<i>n</i>	%
Age		
20-30	2	4.3%
31-40	7	15.2%
41-40	17	37.0%
51-60	15	32.6%
>60	5	10.9%

Table 4.1 presents a breakdown of the ages of participants in a study. The age groups are divided into five categories: 21-30, 31-40, 41-50, 51-60, and over 60 years. Each category lists the number of participants (*n*) and their corresponding percentage (%) of the total group. The 41-50 age group has the highest representation with 17 participants, accounting for 37.0% of the total. This is followed by the 51-60 age group with 15 participants (32.6%), the 31-40 age group with 7 participants (15.2%), the over 60 age group with 5 participants (10.9%), and lastly, the 21-30 age group with the least representation, having only 2 participants (4.3%). This distribution provides a clear overview of the age range and concentration within the study's participant demographic.

Table 4.2*Participant Demographic Characteristics: Race/Ethnicity*

Demographic Characteristics	<i>n</i>	%
Race/Ethnicity		
African American	1	2.2%
Bi-Racial	2	4.3%
Caucasian	40	87.0%
Hispanic	1	2.2%
Native American	2	4.3%

Table 4.2 provides a detailed breakdown of the racial and ethnic composition of the participants in the study. The table categorizes participants into five groups: African American, Bi-Racial, Caucasian, Hispanic, and Native American. Each category includes the number of participants (*n*) and their respective percentage (%) of the total participant pool. The data shows a predominant representation of Caucasian participants, who make up 87.0% of the total with 40 individuals. This is followed by Bi-Racial and Native American groups, each comprising 2 participants and accounting for 4.3% of the total. Both the African American and Hispanic categories have the lowest representation, with 1 participant each, making up 2.2% of the total. This table effectively highlights the racial and ethnic diversity among the study's participants.

While the sample size for this study was too small to be generalized to the larger population, the demographic data are consistent with the larger community college faculty population based on demographic data available NC Community College System data dashboards, located on the NC Community Colleges website (www.nccommunitycolleges.edu),

2023). NCCCS data showed 80% ($n = 12,650$) of the total 15,813 FT North Carolina Community College System faculty were Caucasian, 11% Black ($n = 1,739$), and 3% Hispanic ($n = 474$). Twenty-four percent were between the ages of 35-44 ($n = 3,795$), 37% were aged 45-54 ($n = 5,850$) and 23% were 55-64 years of age ($n = 3,636$). There were no data available for years of teaching experience.

Table 4.3

Participant Demographic Characteristics: Work

Demographic Characteristics	<i>n</i>	%
Years Teaching		
1-5	8	17.4%
6-10	8	17.4%
11-20	20	43.5%
>20	10	21.7%
Department		
Business	10	21.7%
Biology	2	4.3%
English	7	15.2%
Health Sciences	14	30.4%
Humanities/Social Sciences	7	15.2%
Math	1	2.2%
Public Services	5	10.9%

Table 4.3 (continued)

Instructional Area		
Academic	24	51.1%
Career & Technical	23	48.9%
College Size		
<1000	8	17.0%
1000-2999	19	40.4%
3000-5000	13	27.7%
>5000	7	14.9%

Table 4.3 provides a comprehensive overview of the professional backgrounds of the study's participants, focusing on their years of teaching experience, departmental affiliations, instructional areas, and the size of the colleges they are affiliated with. The table is divided into four main categories: Years Teaching, Department, Instructional Area, and College Size, each with its respective count (n) and percentage (%) of participants. In the Years Teaching category, most participants have 11-20 years of experience (43.5%, n=20), followed by those with more than 20 years (21.7%, n=10), and equal representation for those with 1-5 years and 6-10 years (17.4% each, n=8 for both groups). Regarding Department, the most represented is Health Sciences (30.4%, n=14), followed by Business (21.7%, n=10). English and Humanities/Social Sciences are equally represented (15.2%, n=7 each), with fewer participants in Public Services (10.9%, n=5), Biology (4.3%, n=2), and Math (2.2%, n=1). In the Instructional Area category, participants are almost evenly split between Academic (51.1%, n=24) and Career & Technical (48.9%, n=23) areas. Finally, for College Size, the largest group of participants comes from colleges with 1000-2999 students (40.4%, n=19), followed by those in the 3000-5000 student

range (27.7%, n=13). Colleges with less than 1000 students and more than 5000 students are less represented, with 17.0% (n=8) and 14.9% (n=7) respectively. Overall, Table 4.3 offers a detailed insight into the diverse professional dimensions of the participants, highlighting their varied experiences and backgrounds in the educational sector.

Table 4.4

Participant Demographic Characteristics: Online Experience

Demographic Characteristics	<i>n</i>	%
Online Experience		
Taken Online Courses	7	15.2%
Taught Online Courses	39	84.8%

Table 4.4 presents the online educational experience of the study's participants, categorized into two distinct groups: those who have taken online courses and those who have taught them. The table lists the number of participants (*n*) in each category along with their corresponding percentage (%) of the total participant pool. Out of the participants, a small portion, 7 individuals (15.2%), have experience taking online courses. In contrast, a significant majority, 39 participants (84.8%), have experience in teaching online courses. This stark difference highlights a predominant inclination towards teaching online rather than being students in online educational settings among the participants. The table effectively underscores the participants' familiarity and engagement with the online teaching environment, which is a critical aspect of contemporary educational dynamics.

Since the survey used a skip logic format, not all responding participants were guided to complete the entire questionnaire. Participants were divided based on use of Service-learning in

online classes and interest in using service-learning in online classes. More than half of the participants (51.1%, $n = 24$) reported that they did not use service-learning experiences in their courses. Of the participants reporting they did not use service-learning experiences in their courses, 83.3% ($n = 42$) expressed an interest in incorporating service-learning experiences into online courses. Participants not interested in incorporating service-learning experiences into online courses ($n = 5$, 10.6%) were directed to the end of the survey without completing any additional items.

Use of Service-Learning

Most of the participants reported having experience in teaching online courses ($n = 39$, 83.0%). Of the participants reporting the use of service-learning experiences in their courses, 23.5% ($n = 11$) reported use in both seated and online courses, 17% ($n = 8$) in seated courses only, and 6.4% ($n = 3$) in online courses only. Participants indicating use of Service-learning in seated courses and those with an interest in incorporating service-learning into online courses were directed to complete two items regarding intention to use online Service-learning.

Approximately 67% ($n = 26$) of participants indicated they somewhat to strongly agreed with the statement, “I intend to incorporate service-learning into my online courses,” while 48% ($n = 19$) of participants somewhat to strongly agreed with, “I intend to use service-learning in my online courses when it becomes supported by my institution.”

Factors Associated with the Use of Online Service-Learning

Most of the measurement items for each construct showed a general positive perception toward incorporating service-learning in online classes, with mean scores ranging from 4.14 to 5.81 on a 7-point rating response scale. Means, standard deviations, reliability coefficients are presented in Table 4.5. Means scores of 4.69 or higher were suggestive of a positive perception.

Internal consistency was assessed on all measurement items with an overall reliability coefficient of .89. Internal consistency measured for each subscale of intention to use, perceived usefulness, perceived ease of use, and self-efficacy were .78, .93, .90, and .77, indicating that the scales had acceptable internal consistency. However, the subjective norm scale obtained a questionable alpha value of .60 while institutional factors scale was poor with an alpha of .3 (George & Mallery, 2018). Even though faculty participating in this study had a general positive perception toward incorporating service-eLearning in online classes, there were several measurement items that were identified as potential strong facilitators and barriers.

Table 4.5

Measurement Item Descriptive Analysis

Measurement Items	<i>M</i>	<i>SD</i>	Alpha
Intent to Use (ITU)			.78
ITU1	4.96	1.20	
ITU2	4.36	1.50	
Perceived Usefulness (PU)			.93
PU1	4.78	1.57	
PU2	4.84	1.64	
PU3	4.69	1.65	
Perceived Ease of Use (PEOU)			.90
PEOU1	5.11	1.30	
PEOU2	5.28	1.32	

Table 4.5 (continued)

PEOU3	4.34	1.71	
PEOU4	4.14	1.69	
Subjective Norm (SN)			.60
SN1	5.83	1.08	
SN2	5.06	1.45	
SN3	4.36	1.17	
Self-efficacy (SE)			.77
SE1	5.67	.99	
SE2	5.61	1.34	
SE3	5.67	1.12	
SE4	5.81	1.14	
SE5	4.33	1.92	
Institutional Factors (IF)			.30
IF1	5.47	1.59	
IF2	5.14	1.50	
IF3	5.14	1.31	
IF4	4.92	1.62	
IF5	4.28	1.39	

The first research question was to determine what factors faculty identify as barriers to the implementation of service-eLearning into online courses. There were five measurement items in which less than 50% of participants indicated that they somewhat agreed to strongly agreed

with the statement. Table 4.6 presents the measurement item percentages indicating the level of agreement or disagreement. Two of the items were associated with perceived ease of use, with 47.2% (n = 17) indicated that they somewhat or strongly agreed with (PEOU3), “My role as facilitator of service-learning experiences in online courses is clear” and only 38.9% (n = 14) for (PEOU4), “Overall, I find it easy to incorporate service-learning experiences into online courses.” One item was associated with self-efficacy (SE5), with 47.3% (n = 17) indicating somewhat to strong agreement with, “I could incorporate service-learning experiences into online courses if I were more competent with technology.” Only 36% (n = 13) of participants somewhat to strongly agreed with the institutional factors statement (IF5), “I could incorporate service-learning experiences into online courses if the technology was more reliable to support eService-learning.” The lowest measurement item was associated with subjective norm (SN3) with only 27.7% (n = 10) of participants expressing somewhat to strong agreement with, “I believe my peers would perceive me in a higher status if I incorporated service-learning experiences into online courses.”

The third research question was to determine what factors faculty identify as facilitating the implementation of service-eLearning into online courses. Five measurement items were identified in which more than 80% of participants indicated that they somewhat agreed to strongly agreed with the statements, as presented in Table 4.6. Four of the items were associated with self-efficacy: SE1) “I could incorporate service-learning experiences into online courses if I had instructions or a template for reference (n = 32),” SE2) “I could incorporate service-learning experiences into online courses if I had previously seen someone else doing it before trying it myself,” (n = 29), SE3) I could incorporate service-learning experiences into online courses if I had previously used service-learning experiences in a seated course,” (n = 31) and SE4) “I could

incorporate service-learning experiences into online courses if there is technical assistance available for help” (n = 30). The remaining item scoring very well was associated with subjective norm (SN1), “I believe those people who are important to me in my job would strongly support me using service-learning in online courses” (n = 32).

Table 4.6

Percentages of Measurement Items Indicating Level of Agreement or Disagreement

Measurement Items	Strongly Agree	Agree	Somewhat Agree	Neither Agree or Disagree	Somewhat Disagree	Disagree	Strongly Disagree
Intent to Use (ITU)							
ITU1: I intend to use service-learning in my online courses when it becomes supported by my institution.	8.3%	25.0%	33.3%	25.0%	4.2%	4.2%	0%
ITU2: I intend to incorporate service-learning experiences into my online courses.	4.0%	20.0%	20.0%	32.0%	4.0%	12.0%	4.0%
Perceived Usefulness (PU)							
PU1: Incorporating service-learning experiences into online courses improves my performance as an instructor.	10.8%	27.0%	24.3%	21.6%	2.7%	10.8%	2.7%

Table 4.6 (continued)

PU2: Incorporating service-learning experiences in my online course enhances my effectiveness as an instructor.	16.2%	27.0%	10.8%	32.4%	0%	10.8%	2.7%
PU3: Overall, I find service- learning experiences effective in meeting student learning objectives in my online courses.	11.1%	30.6%	11.1%	27.8%	8.3%	5.6%	5.6%
Perceived Ease of Use (PEOU)							
PEOU1: Learning how to incorporate service-learning experiences into an online course would be easy for me.	13.4%	30.6%	25.0%	13.9%	16.7%	0%	0%
PEOU2: It would be easy for me to become skillful in using service- learning in online courses.	16.7%	38.9%	13.9%	16.7%	13.9%	0%	0%
PEOU3: My role as facilitator of service-learning experiences in online courses is clear.	11.1%	22.2%	13.9%	19.4%	16.7%	13.9%	2.8%

Table 4.6 (continued)

PEOU4: Overall, I find it easy to incorporate service-learning experiences into online courses.	8.3%	16.7%	13.9%	30.6%	8.3%	16.7%	8.3%
Subjective Norm (SN)							
SN1: I believe those people who are important to me in my job would strongly support me using service-learning in online courses.	27.8%	44.4%	16.7%	5.6%	5.6%	0%	0%
SN2: I believe the people in my workplace whose opinion I value would prefer me to use service-learning in online courses.	19.4%	22.2%	19.4%	30.6%	0%	8.3%	0%
SN3: I believe my peers will perceive me in a higher status if I incorporated service-learning experiences into online courses.	8.3%	8.3%	11.1%	61.1%	5.6%	5.6%	0%
Self-efficacy (SE)							
SE1: I could incorporate service-learning experiences into online courses if I had instructions or a template for reference.	25.0%	27.8%	36.1%	11.1%	0%	0%	0%

Table 4.6 (continued)

SE2: I could incorporate service-learning experiences into online courses if I had previously seen someone else doing it before trying it myself.	30.6%	30.6%	19.4%	11.1%	5.6%	2.8%	0%
SE3: I could incorporate service-learning experiences into online courses if I had previously used service-learning experiences in a seated course.	25.0%	36.1%	25.0%	8.3%	5.6%	0%	0%
SE4: I could incorporate service-learning experiences into online courses if there is technical assistance available for help.	38.9%	19.4%	25.0%	16.7%	0%	0%	0%
SE5: I could incorporate service-learning experiences into online courses if I were more competent with technology.	16.7%	13.9%	16.7%	25.0%	5.6%	11.1%	11.1%

Table 4.6 (continued)

Institutional Factors (IF)							
IF1: I could incorporate service-learning experiences into online courses if I had more time to work on the online course in which service-learning experiences would be offered.	36.1%	22.2%	11.1%	22.2%	2.8%	2.8%	2.8%
IF2: I could incorporate service-learning experiences into online courses if I had additional help such as work-study students or part-time instructors.	19.4%	27.8%	19.4%	22.2%	5.6%	2.8%	2.8%
IF3: Incorporating service-learning experiences into online courses would be easy because the institution's learning management system is easy to navigate.	11.1%	33.3%	27.8%	22.2%	0%	2.8%	2.8%

Table 4.6 (continued)

IF4: My institution's learning management system has adequate technical support to support eService-learning.	13.9%	30.6%	19.4%	22.2%	2.8%	5.6%	5.6%
IF5: I could incorporate service-learning experiences into online courses if the technology was more reliable to support eService-learning.	8.3%	8.3%	19.4%	44.4%	8.3%	8.3%	2.8%

Relationship Between Factors

The fourth research question was to assess how perceived ease of use, perceived usefulness, subjective norm, self-efficacy, intent to use, and institutional factors influence the incorporation of service-eLearning into online courses. Prior to running the analysis, data were screened for outliers, linearity, and univariate and bivariate normality. No univariate outliers were detected in the data. Linearity was observed through visual inspection of scatterplots. Univariate skewness and kurtosis normality revealed all values less than 1. A Mardia's test was conducted for each pair of variables to determine if the variable pairings could have been produced by a bivariate normal distribution. The results of Mardia's test were significant based on an alpha value of .05 for the following variable pairings and suggests that it is unlikely for the variable pairings to have been produced by a bivariate normal distribution: subjective norm and perceived usefulness ($p_{skew} < .001$, $p_{kurt} < .001$). This indicates that the bivariate normality

assumption is violated. J. Cohen's (1988) standard was used to evaluate the strength of the relationships, where coefficients between .10 and .29 represent a small effect size, coefficients between .30 and .49 represent a moderate effect size, and coefficients above .50 indicate a large effect size.

A Spearman correlation analysis was conducted among intention to use, perceived usefulness, perceived ease of use, subjective norm, self-efficacy, and institutional factors. The results of the correlations were examined using the Bonferroni correction to adjust for multiple comparisons based on an alpha value of .05. A significant positive correlation was observed between intention to use and perceived usefulness, with a correlation of .72, indicating a large effect size ($p < .001$, 95 % CI [.45, .87]). A significant positive correlation was observed between perceived usefulness and subjective norm, with a correlation of .64, indicating a large effect size ($p = .01$, 95% CI [.32, .83]). A significant positive correlation was observed between subjective norm and perceived usefulness, with a correlation of .61, indicating a large effect size ($p = .024$, 95% CI [.32, .83]). No other significant correlations were found. Table 4.7 presents the results of the correlations.

Table 4.7

Spearman Correlation Matrix of Factors

Construct	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1. Intent to Use	4.66	1.21	--					
2. Perceived Usefulness	4.73	1.51	.72**	--				
3. Perceived Ease of Use	4.73	1.34	.47	.35	--			
4. Subjective Norm	5.08	.93	.51	.64*	.49	--		

Table 4.7 (continued)

5. Self-Efficacy	5.42	.97	.33	.54	.21	.52	--	
6. Institutional Factors	4.99	.76	.14	.40	.15	.29	.61*	--

* $p < .05$

** $p < .001$

Chapter Summary

The results presented above suggest that faculty in this study have experience with teaching online courses but less experience incorporating service-learning experience into their online courses. Faculty in this study expressed interest in incorporating service-learning experiences in their online courses and identified several factors perceived as facilitators and barriers. Of the factors assessed in this study, only perceived usefulness had positive correlation to intent to use. A more detailed summary and discussion of the findings are presented in the next chapter.

CHAPTER 5: DISCUSSION

Study Purpose

Higher education has always had a focus on making higher education more accessible. From the early days of the Morrill Act, when land grant institutions were established to educate farmers and other working individuals, to today, higher education opportunities have never been more accessible. Technology today allows us to connect with students across vast geographical distances and to provide service-learning experiences that help connect students to their local communities or communities abroad. Service-learning focuses on critical and reflective thinking, and personal and civic responsibility. Participating in service-learning opportunities has been shown to have a positive benefit in the areas of knowledge acquisition, civic awareness, sense of community and skill development such as critical thinking and leadership development (Compare & Albanese, 2022; Faulconer, 2020; Valerie, et al., 2019). Learning through experience and reflection were key features of adult learning theories such as Dewey's progressive education movement, Kolb's experiential learning model, Mezirow's transformational learning theory and Knowles' adult learning theory models. Each of these models focused on experience being a key factor in learning that challenged learners to apply knowledge or skills learned, critically reflect and discuss learning with others, and develop increased awareness and understanding which leads to new learning. Service-eLearning is a pedagogy that increases a student's self-efficacy and helps develop strong community ties (Bramley, et al., 2023).

As more courses continue to be transitioned to the online environment, it is important to understand the benefits and challenges faculty face when incorporating service-learning experiences into online courses. Service that is integrated into online courses is a logical

progression as advances in technology and distance education allow students to be engaged in coursework with peers located across diverse geographical locations and participate in communities locally and abroad (Birkeland et al., 2018; Faulconer, 2021; Guthrie & McCracken, 2010).

The recent Covid-19 pandemic forced unprecedented change in education. Higher education institutions were closed in 185 countries in 2020 and affected more than 100 million learners around the world (Morales et al., 2021). This new normal forced many educators and students who were unfamiliar or unskilled with teaching technologies into unfamiliar territory due to the need to change swiftly to online education. This abrupt change exposed barriers to adapting to the online environment and educational institutions must be aware of barriers and offer specific technical training to its faculty and staff (Marinoni et al., 2020). Institutions that consider online learning, more specifically service-eLearning, important to their institution, need to understand their faculty's perception of service-eLearning, how those factors shape faculties intention to use service-eLearning and how institutions can support faculty through training, resources, and institutional culture (Wingo et al., 2017).

This study's primary purpose was to identify the factors which faculty perceive may either facilitate or hinder the implementation of SL in online environments. Service-learning has been shown to have numerous benefits for student learning, engagement and retention, therefore, it would be reasonable to believe faculty who utilized SL in their seated courses would transition the same learning experiences into the online environment (Bramley et al., 2023; Clayton et al., 2013). By determining what factors faculty believe facilitate or hinder the transition of service-learning experiences into online courses, community college administrators and other college personnel who value SL will be armed with data to make sound decisions as how to best

implement service-eLearning at their institution and identify the types of training and support needed for online instructors to successfully transition SL experiences into online courses.

The study investigated the following questions:

1. What variables do faculty identify as barriers to the implementation of service-eLearning in online courses?
2. What variables do faculty believe are associated with facilitating the implementation of service-eLearning in online courses?
3. What is the correlation of perceived ease of use, perceived usefulness, subjective norm, self-efficacy, institutional factors, and intent to use with the behavioral intention of incorporation of service-learning into online courses?

Demographic information was obtained to describe the study participants that included age, race/ethnicity, PT/FT job status, years of teaching experience, academic department, instructional area, college size, and experience in online courses. The findings indicated that most respondents ranged in age from 40-60 years, were Caucasian, held FT teaching positions and had 10-20 years' teaching experience. Their instructional areas were closely split with 24 respondents teaching in academic areas and 23 respondents teaching in career and technical programs. Health Sciences respondents represented the largest department, with Business representing the second largest department. Approximately 40% of respondents work at community colleges whose student bodies range between 1,000- 2,999 students in size. While the sample size in this study was too small to be generalized to the larger population, the results are important because they speak to the trend of retirements starting to impact education and the US economy. US Census data (2020) shows that the baby boomers are the second largest age group (73 million) after their children, the millennials. As our educators start to retire, more

educators that use service-learning will be leaving the profession. This institutional service-learning knowledge must be passed on to younger educators if we want to ensure service-learning endures.

The conceptual framework used for this dissertation was developed from the TAM. The TAM has been expanded over the years to include social constructs such as self-efficacy, subjective norm and institutional factors, such as technology infrastructure, technical support, and instructional supports such as reduced teaching loads, to give a more holistic view of the types of factors that may impact an individual's intention to perform a behavior. This study showed the factors of self-efficacy, subjective norm, perceived ease of use, and institutional factors were identified either as a barrier or facilitated service-eLearning for community college faculty.

With the technological transformation of education, colleges and universities must evolve from “lecture-based learning” and move more toward “problem-based learning” methods that actively engage students (Jenson, 2019). This transition will require faculty to redesign their courses, determine competencies and evaluate assessments for the online environment. A meta-analysis, using the TAM as the basis, found faculty had concerns about their image as online instructors, technical support, manageable workloads, and manageable class size (Wingo et al., 2017).

Faculty who are not competent with technology or believe they lack the ability to learn new ways to use technology in teaching may be reluctant to transition SL into the online environment. Bandura's work with self-efficacy suggested there are four main influences on self-efficacy. Those components are mastery experiences, vicarious experiences, social modeling, and verbal persuasion, with mastery being the most critical source of influence on self-efficacy

(Rumjaun & Narod, 2020). A person's belief is positively or negatively impacted by their previous experience in accomplishing a task (mastery), observing others successfully complete a task (vicarious experience), seeing or feeling the emotions, stressors, or psychological state associated with performing a task (social modeling), or how positive or negative feedback can impact their belief in their ability to perform a task (Raveh et al., 2023).

Research Question One

Research question one examined faculty perceptions of barriers to the implementation of SL into online courses. Specific items from the categories of perceived ease of use, self-efficacy, institutional factors, and subjective norm were identified as barriers to implementing SL into online courses. Two items dealing with perceived ease of use indicated that many surveyed faculty did not understand their roles as a facilitator in eService-learning (PEOU 3) and did not find it easy to incorporate SL into an online course (PEOU 4). Understanding faculty perceptions about the perceived usefulness or perceived ease of use could be useful in helping educational institutions determine how to train faculty in understanding their roles as a facilitator (Wingo et al., 2017). Faculty who do not understand their role and the expectations of how they interact and serve students and community partners will not be successful in implementing service-eLearning. This issue could potentially be addressed through a SL mentoring program that pairs experienced SL faculty with inexperienced SL faculty. When examining self-efficacy through mastery experiences and vicarious experiences, pairing new SL faculty with experienced SL mentors could increase faculty's self-efficacy through the successful implementation of a service-eLearning course or through observation (vicarious experience) of a successful service-eLearning course taught by experienced SL faculty. Multiple works addressing perceived ease of use revealed that if individuals did not see tools as easy to use in their daily work, they were

more likely to abandon their use, regardless of the benefits (Ajzan & Fishbein, 1975; Davis, 1985; Yuen & Ma, 2008). Pairing SL faculty to team teach a successful service-eLearning allows new SL faculty to observe the benefits to the students, the community partner, and the institution. Institutions aiming to advance the incorporation of service-eLearning courses must focus on intentional faculty development that clearly defines the roles and expectations for faculty teaching a service-eLearning course. Service-eLearning mentoring programs or pairing seasoned service-eLearning faculty with new faculty can help new faculty be more successful in incorporating service into their online courses (Faulconer, 2020).

In addition to intentional faculty development, colleges and universities should develop digital learning methodologies, provide digital learning contexts, digital tools and faculty and student support systems (Krishnamurthy, 2020). Faculty development focusing on the role/duties of facilitation of service-eLearning, plus educating faculty on the different types of service-eLearning would help address these areas of concern.

Like curriculum design planning required for standard courses, SL faculty must also consider service design requirements such as instructional technologies required by both students and SL partners, partner identification and selection, communication with partners and students, equipment, time and alignment of service to the course goals. When looking at perceived ease of use, Waldner and Hunter (2008) reported that service-eLearning courses took approximately 25% more time to develop compared to a traditional SL course. Faulconer (2020) notes that it takes faculty 4-5 months longer to plan and create a new service-eLearning course, add a service component to an existing online course or transition a seated SL course to an online SL course. Because of the increased time requirements associated with online courses, additional support may be required. To overcome this obstacle, additional support for faculty who desire to

incorporate service-eLearning may come in the form of reduced teaching loads and utilization of teaching assistants (Crawford-Ferre & Wiest, 2010; Major, 2010; Reid, 2014). These increased costs must be considered by institutional leadership when budgeting for the institution.

When examining self-efficacy and the use of technology, approximately half of respondents felt they could incorporate SL into online courses if they were more proficient with technology. Faculty with high self-efficacy are more likely to use innovative instructional activities and are more willing to try more innovative teaching methods (Joo et al., 2018). To maximize successful implementation of service-eLearning, technology training for everyone involved (faculty, students, community partners and the instructional design team) is imperative. General trends noted among faculty regarding new ways of teaching and learning is that many faculty lack confidence in their ability to think broadly with technology, do not use computers extensively outside of school, and if they do feel comfortable in their computer skills, they are uncertain about how to use technology in their teaching (Granic & Marangunic, 2019; Jacobsen & Friesen, 2002). Like students, faculty come with varying degrees of online experience and may also require training in not only use of the technology but also how to incorporate SL into online courses. Pairing new SL faculty with experienced service-eLearning mentors may help faculty be more successful with the transition.

Research Question Two

Research question two examined the factors that faculty perceived as facilitating the transition of SL into online courses. Of the five variables (perceived ease of use, perceived usefulness, subjective norm, self-efficacy, and institutional factors), faculty rated the variables of self-efficacy and subjective norm highest as facilitating factors. Respondents somewhat agreed to strongly agreed with four items from the questions dealing with self-efficacy.

Bandura's work in self-efficacy was not concerned with a person's skill level but more with their judgement or belief in their ability to perform an action. Individuals who believed they could perform certain tasks were more likely to perform them (Bandura, 1985). Most faculty believed they could incorporate SL into online courses if they had instructions or a template for reference, had previously seen someone else doing it before trying it (vicarious experiences), had previously used SL in seated classes (mastery experiences), or had technical assistance available for help.

Bandura (1985) believed vicarious experiences were experiences gained by watching or observing other people's experiences in similar tasks. Mentoring or pairing experienced service-eLearning faculty and faculty new to service-eLearning has been identified as a positive means of supporting new service-eLearning faculty to exchange ideas, experiences, and resources (Faulconer, 2020). Mentoring also lies within a faculty person's social model and can be an example of the verbal persuasion component of self-efficacy. It stands to reason that the more positive the mentor, if positive feedback is delivered, and there is a trusting relationship between the mentor/mentee, new faculty will be more positive about their belief in their ability to implement service-eLearning (Rumjaun & Narod, 2020). Experienced SL faculty who experience positive mentoring relationships with new SL faculty may also be more apt to share resources such as previously developed templates, rubrics, and other service-learning course deliverables.

Like self-efficacy, subjective norm is a social construct that refers to the belief that if individuals who are important to the user believe that he/she should perform the behavior in question, the user is more apt to perform the behavior. The Theory of Reasoned Action, developed by Ajzen and Fishbein (1980), posited that intention to perform a certain behavior was

determined by attitude and subjective norm for a particular individual. Faculty responding to this survey agreed they believed people who were important to them in their job would strongly support them to use eService-learning. The implication for institutions who desire more faculty to use pedagogical practices, such as Service-learning in online courses, requires leadership at different levels of the institution to support and institutionalize SL. Institutional leadership not only has to share the message with their campus community reflecting their belief in SL as a useful pedagogy, but must also use the strategic planning process to drive the institutionalization of SL. This includes including SL in institutional documents such as assessments and annual performance reviews (Clayton et al., 2013; Faulconer, 2021).

Research Question Three

The final research question examined the relationship or correlation of perceived ease of use, perceived usefulness, subjective norm, self-efficacy, institutional factors, and intent to use with the behavioral intention of incorporation of SL into online courses.

Perceived usefulness was the only variable to have a significant positive correlation with intent to use. Davis' (1986) research involving technology acceptance in the workplace implied that people will or will not use an application unless they believe it will help them perform their job better. A person's belief in perceived usefulness impacts their attitudes towards use, their intention to use a new system, and is one of the strongest determinants of actual system use. This same principle could be applied to faculty seeking to use a pedagogical tool such as service-learning (Yoshida, 2016). Helping faculty understand and acknowledge the usefulness of using service-eLearning as a high impact practice is paramount to the incorporation of service activities in online environments. Institutions that believe in the benefits of service-learning must articulate the value of service-eLearning across their campus (Krishnamurthy, 2020).

While perceived usefulness was the only factor correlated to intent to use, there was a significant positive correlation of subjective norm with perceived usefulness and a significant positive correlation between institutional factors and self-efficacy. The Theory of Reasoned Action examined the social construct of subjective norm and how an individual may behave in a certain manner, based on the influence of how important a person may be to the individual (Ajzen & Fishbein, 1980). Based on this theory, individuals whom faculty view as important to them in their workplace (executive leadership, immediate supervisors, and peers) and who believe service-eLearning is a useful pedagogical practice, can influence how that faculty views the perceived usefulness of service-eLearning (Awais, 2023).

Another relationship was seen between the factors of self-efficacy and institutional factors. Social modeling describes the emotional, physical stress, or psychological states that people may experience when attempting new tasks. While a person may believe they have the skills or abilities necessary to perform a specific task or behavior (incorporate SL into an online course), their overall belief in their ability to implement service-eLearning could be negatively impacted by institutional factors such as unreliable technology, lack of resources such as time to dedicate to course development, lack of technical support, and learning management systems that are not intuitive or easy to navigate. Institutions who value service-learning must invest the resources to have reliable technology and easy to navigate learning management systems, provide faculty easy access to technical support when they encounter issues or problems, and provide resources that help faculty successfully plan and develop service-eLearning courses. Due to the increased time required to develop service-eLearning courses, resources such as course releases or hiring of additional part-time faculty may be required and institutions must be willing to budget for these expenses (Durr et al., 2021; Joo, 2018; Keener, 2017).

Theoretical Implications

The theoretical framework for this study was the Technology Acceptance Model (TAM). This framework was developed to help predict and understand technology use and acceptance of individuals. Davis believed the factors of perceived usefulness and perceived ease of use influenced the behavioral intention of an individual to use technology (Davis, 1985).

The use of technology requires faculty to have a digital mindset and to be open to the possibility of new ways to engage students, however faculty differ widely in their attitudes and ability to use technology. Findings from this study support the TAM and perceived ease of use as a factor that influences faculty intent to incorporate service-eLearning. Faculty identified two items of perceived ease of use as barriers to implementing service-eLearning. Faculty did not understand their role as a facilitator of service-eLearning and they did not find it easy to incorporate service-learning experiences in online courses. If faculty do not find service-eLearning easy to use or understand their role, they may be less inclined to use service-learning experiences in their online courses. Many faculty also believed that even if they were more competent with technology or the technology were more reliable, they still could not incorporate service-eLearning into online courses.

Yuen and Ma (2008) expanded the TAM to include the social concepts of self-efficacy and subjective norm. They believed one's belief in their ability to perform an action (self-efficacy) and the person's perception of the social pressures put on him to perform the behavior (subjective norm) also influenced the intention to perform or not perform a behavior. This study found that faculty perceived four factors dealing with self-efficacy and one factor dealing with subjective norm as facilitating factors to the incorporation of service-eLearning. Faculty believed they could perform service-eLearning if they had a template or instructions, had

seen someone else do it previously, had previously used service-learning in a seated course, or had technical assistance available, if needed. They also believed those important to them in their job would strongly support them using service-eLearning. These findings support the concepts of self-efficacy and subjective norm as they pertain to the behavioral intention to use service-eLearning.

Limitations

This study has several limitations that should be noted. First, this study had a small sample size, which does not allow for the results to be generalized to the larger population. Although the sample size was small, the participant demographics are similar or consistent with those reported on the NC Community College system website data dashboards.

Second, data were collected from a single community college system in one state. Although the researcher considered community college systems in the southeastern US, the differences across the state community college systems were too great and the decision was made to only survey community colleges in North Carolina.

Participant recruitment occurred indirectly due to the reliance on each institution's CAO for distribution of the survey to their campus community. Because of this, the researcher was unable to accurately determine the total number of research survey participants or determine which colleges had responded.

Data were collected using a previously established, reliable and valid survey instrument; however, the additional items created by the researcher to measure institutional factors had a low internal consistency and the results should be interpreted with caution. The items measuring institutional factors should be re-evaluated for relevance and possible modification. The data did not meet the Pearson correlation assumption of bivariate normality, which resulted in the use of

Spearman correlation to determine relationships between the independent variables. The violation in bivariate normality may limit the inference on the strength of association in the target population.

The final limitation of this study was the gap in time from IRB approval to the actual survey administration. IRB approval was obtained by the researcher in 2019. The survey was administered in April of 2021, a time when many educational institutions were just beginning to reopen their campuses and return to in-person teaching from the Covid-19 pandemic. Email responses received from institutions who declined to participate referenced faculty burnout, stress, too much for faculty right now, or one more thing for them to do, as reasons to not participate. Based on the lack of institutional response and the anecdotal responses from institutions who declined to participate, the researcher believes the response rate was impacted by fatigue, stress, and/or teacher burnout from teaching virtually for two years during the pandemic.

Implications for Practice

Online learning experiences should align with the principles of teaching adult learners, online education, and service-eLearning. Knowles' Adult Learning Theory suggests adults are self-motivated learners, center learning around their life experiences, bring vastly different life experiences to the table, and are self-directed learners who value mutual inquiry in lieu of the transmission of knowledge. Online learning strategies such as service-eLearning experiences, allow adult learners to actively share their experiences with others and be actively engaged in the learning process in the online environment (Britt, 2015; Faulconer, 2023).

The findings of this study determined several factors faculty identified as barriers to implementing service-eLearning. Faculty did not find service-eLearning easy to use and did not

understand their role in facilitating service-eLearning experiences. Many faculty also believed that even if they were more competent with technology or the technology were more reliable, they still could not incorporate service-eLearning into online courses. Faculty also identified several facilitating factors associated with the incorporation of service-eLearning. Four factors related to self-efficacy were identified as facilitating factors. Eighty percent or more of the respondents believed they could incorporate service-eLearning if they had a template or instructions, seen someone else successfully perform service-eLearning, they had used service-learning previously, or had technical assistance for help. Another factor, subjective norm, was also rated highly as a facilitating factor. Faculty believed those who were important to them in their jobs would support them if they used service-eLearning. For institutions that value service-eLearning and desire to implement these experiences more broadly across online programs or specific courses, these findings suggest that faculty need support in the forms of intentional faculty development, institutional support, and the creation of a service-eLearning culture.

Implications for Practice 1: Intentional Faculty Development

For service-eLearning to be successful, intentional faculty development focused around service-learning, course design and technology instruction are key. This study found that faculty did not find service-eLearning easy to use and did not understand their role as facilitator in service-eLearning. Davis (1985) early works with the TAM noted that if individuals don't perceive technology as easy to use, they are less likely to perform a behavior or an action.

Bandura's work in self-efficacy noted that mastery experiences and vicarious experiences have a great influence on an individual's belief in their ability to learn new ways to teach. (Rumjaun & Narod, 2020). Faculty indicated they believed they could incorporate service-eLearning if they had templates, seen someone else perform service-eLearning, had previously

service-learning in another course, or had technical assistance for help when needed. Providing faculty training on service-eLearning, the different service-eLearning typologies, and the role of the facilitator in service-eLearning courses could help faculty develop a foundational understanding of what service-eLearning is, best practices in online instruction, what type of service-eLearning is best to incorporate based on the intricacies of the course, and how to communicate and interact with students and community partners (facilitation). These types of training and deliverable for reference (such as templates, rubrics, etc...) would be integral in building faculty self-efficacy and positively influencing faculty perception of the perceived ease of use of service-eLearning.

Successful online teaching depends on faculty being willing to use technology, their self-efficacy in using technology and their intention to use technology (Ali, 2021; Zhao & Zhao, 2021). Faculty who do not believe they are competent with technology or believe they cannot learn to use technology in the classroom may be hesitant to transition service-learning experiences into online courses and may not maximize the use of technology in their courses. Professional development centered around using technologies, course design, and best practices in online teaching and learning is crucial for all faculty to become proficient in creating meaningful, well-designed service-eLearning experiences (Leary et al., 2020).

Implications for Practice 2: Institutional Support

Targeted professional development is crucial to advance service-eLearning at institutions, however targeted professional development is only one facet of successful service-eLearning initiatives. Institutional support for service-eLearning may come in the form of support from administration and financial or budgetary support. Subjective norm was a factor identified as a

facilitator of service-eLearning, with faculty agreeing that people who were important to them in their job would strongly support their use of service-eLearning.

Administrators who value service-learning may need to provide additional support for faculty learning to use service-eLearning. Developing service-eLearning courses may take up to 25% more time than traditional service-learning courses. Supporting this increased workload might come in the form of decreased teaching loads for service-eLearning faculty or the hiring of additional PT teachers (Reid, 2014). These increased costs must be factored into institutional budgets and institutions need to be able to account for these increased costs.

Implications for Practice 3: Create Service-eLearning Culture

For service-eLearning to be successful across the institution, service-eLearning must be valued, starting with the leadership of the institution. Administrators that value and support service-eLearning can help create and support a culture of service by incorporating service-eLearning into the institutional planning process. Building service-eLearning into the strategic plan, with measurable goals and objectives for accountability, ensures that service-eLearning is kept in front of the college campus. Administrators should support sharing service-eLearning data, not only with the campus community but also the community at large served by the college. Service-eLearning data could be shared in annual campus publications, donor and fundraising materials, student news outlets and also become a part of non-profit publications highlighting the support received through service partnerships with the college.

Recommendations for Future Research

Recommendation 1: Replicate At An Urban Community College

There is a well-documented literature base regarding service-learning that occurs in colleges or universities, however, little information exists regarding the level of service-learning,

or more specifically, service-eLearning occurring at the community college level. Future research centered around service-eLearning at community colleges could be beneficial to determine the level of service-learning currently occurring at community colleges. Replicating this study at a larger, urban community college that has an established service-learning center would yield more robust and richer data

Recommendation 2: Study Service-eLearning Community Partners

Numerous studies have detailed benefits of service-eLearning for students, such as critical thinking skill development, civic engagement and awareness, leadership development, and knowledge acquisition but few studies have been conducted to examine the community partner benefits of service-eLearning, the technology needs and/or the training requirements for community partners to be able to successfully interact with service-eLearning students.

Recommendation 3: Service-eLearning in STEM Disciplines

Finally, more research could be considered to examine how to incorporate service-eLearning into more STEM related courses and programs. This study found that more service-eLearning occurred in health science, business, and social science courses. While the sample size of this study was small and results could not be generalized to the larger population of community college faculty, the findings are consistent with findings from previously conducted studies showing a lack of service-eLearning in the STEM disciplines. Exploring the barriers of incorporating service-eLearning into STEM programs could help institutions provide equitable student learning experiences across all programs.

Conclusion

Educators can no longer continue to rely on traditional teaching and learning models to engage today's learners. Covid-19 forced educational institutions to change at a scale that was

unprecedented (Krishnamurthy, 2020). Technological advances, new learning technologies, and the increase in social networking has created the ability for educators to reach students who have more access and are more connected than ever before. Service-eLearning provides educators an opportunity to use technology to engage students locally and abroad to critically think, collaborate, problem solve, challenge their current belief system and develop new learning. Innovation in education and the transition from old learning systems should create new systems that are engaging and promote assessment of learning outcomes (Morales, 2020).

This study aimed to uncover the factors influencing community college faculty when considering the integration of SL experiences into online courses. By understanding the factors that faculty believe hinder or facilitate service-eLearning implementation, educational institutions who value service-eLearning can provide targeted support and resources, facilitating the successful implementation of SL within the online learning environment. Faculty in this study believed they could implement service-eLearning if they had a template or instructions to follow, had previously taught a course involving service-learning, or could observe someone teach on online course with a service component. They also believed they could implement service-eLearning if someone they valued in their job, such as a direct supervisor or someone from administration, would support them using service-eLearning. Although it is important to acknowledge the limitations of this study, the researcher believes valuable, practical information was obtained to help create strategies and deliverables (such as support systems, training, templates and rubrics) for community colleges desiring to promote the implementation of service-eLearning. The research contributes to the broader understanding of technology acceptance and pedagogical innovation within higher education.

APPENDICES

Appendix A – Gatekeeper Permission Letter

eIRB #16189 Gatekeeper Permission Email

Email subject line: Permission to Contact Faculty Requested

Dear Mr./Ms/Mrs. X:

Greetings! My name is Robin Ross. I am a doctoral student in Adult and Community College Education at North Carolina State University exploring what factors facilitate or hinder the incorporation of service-learning experiences in online community college courses.

I am writing to ask your permission to contact faculty at your institution and invite them to participate in my dissertation research, which would involve completing an online survey that would take about 15 minutes to complete and ask questions about Service-learning in the course(s) that the individual teaches.

All survey responses will be handled confidentially and, at no point, will the name of the faculty member or your institution be reported to anyone beyond the research team. The research is minimal risk and no benefit to participants, although the information could help other faculty members and institutions facilitate service-learning components in their online courses.

Could you please let me know if it would be okay to contact faculty and staff at your institution and invite them to participate in this research? A one-word “yes” reply to this email would suffice. If granted approval to conduct the survey research, a faculty participation letter containing a survey link is available to you to disseminate to your faculty that will grant them access to the electronic survey.

If you say no or do not respond to this email, I will not contact the faculty and staff at your college.

If you have questions about this research, please contact me at rlross2@ncsu.edu or 704-929-8115. You can also contact my faculty advisor, Dr. James Bartlett, at jebartl3@ncsu.edu or 919-208-1697.

Thank you for your time and consideration of this research project at what I can only imagine is a particularly difficult time for all educators.

Sincerely,

Robin L. Ross

Appendix B – Faculty Recruitment Email

eIRB #16189 Request for Faculty Participation Email

Email subject line: Please consider participating in my research!

Dear Mr./Ms/Mrs. X:

Greetings! My name is Robin Ross. I am a doctoral student in Adult and Community College Education at North Carolina State University exploring what factors facilitate or hinder the incorporation of service-learning experiences in online college courses.

I am writing to invite you to participate in my dissertation research, which would involve completing an online survey that would take about 15 minutes to complete and ask questions about Service-learning in the course(s) that the individual teaches.

Participating in this research is neither a requirement nor expectation of your job.

All survey responses will be handled confidentially and at no point will your name or the name of your institution be reported to anyone beyond the research team.

The research is minimal risk and no benefit to you, although the information could help other faculty members and institutions facilitate service-learning components in their online courses.

If you want to participate in this research, please click here

https://ncsu.qualtrics.com/jfe/form/SV_3sHLRixDaEKuPVX

To ensure that your responses remain confidential, please take the survey in a private location with your browser in private/incognito mode and close your browser when finished.

If you have questions about this research, please contact me at rlross2@ncsu.edu or XXX-XXX-XXXX. You can also contact my faculty advisor, Dr. James Bartlett, at jebartl3@ncsu.edu or XXX-XXX-XXXX.

Thank you for your time and consideration of this research project at what I can only imagine is a particularly difficult time for all educators.

Sincerely,

Robin L. Ross

Appendix C – Yuen and Ma Survey Instrument

Original Intent to Use e-Learning Technology Survey (Yuen and Ma, 2008)

Measurement Items

Intention to Use (ITU), adapted from Fishbein and Ajzen (1975)

ITU1 I intend to use Interactive Learning Network (ILN) when it becomes available in my school and at home.

ITU2 I intend to ILN in my study as often as possible.

Perceived Usefulness (PU), adapted from Davis (1989)

PU1 Using ILN improves my performance.

PU2 ILN enables me to accomplish tasks more quickly.

PU3 Using ILN enhances my effectiveness on the study.

PU4 Using ILN increases my productivity.

PU5 Overall, I find ILN useful in my study.

Perceived Ease of Use (PEOU), adapted from Davis (1989)

PEOU1 Learning to operate ILN is easy for me.

PEOU2 It is easy for me to become skillful in using ILN.

PEOU3 My interaction with ILN is clear and understandable.

PEOU4 Overall, I find ILN easy to use.

Subjective Norm (SN), adapted from Fishbein and Ajzen (1975)

SN1 Those people who are important to me in my job would strongly support my using ILN in my study of the course.

SN2 People whose opinions I value would prefer me to use ILN in my study of the course.

Self-efficacy (SE), adapted from Compeau and Higgins (1999)

SE1 I could complete the job using ILN if I had if I had only the software manuals for reference.

SE2 I could complete the job using ILN if I had seen someone else using it before trying it myself.

SE3 I could complete the job using ILN if I had a lot of time to complete the job for which the ILN was provided.

SE4 I could complete the job using ILN I just had built in help facility for assistance.

SE5 I could complete the job using ILN if someone showed me how to do it first.

SE6 I could complete the job using ILN if I had used a similar package before this one to do the same job.

Appendix D – Yuen Permission Email

Service-eLearning Dissertation

Robin Ross

Thu 1/3/2019 2:27 PM

to:hkyuen@hkucc.hku.hk <hkyuen@hkucc.hku.hk>;

Good afternoon Mr. Yuen,

My name is Robin Ross and I am a current doctoral student at North Carolina State University. I am in the dissertation process and am exploring faculty perceptions in regards to transitioning service learning experiences into the online environment. I was very excited to read your research article, Exploring Teacher Acceptance of e-learning Technology, and believe your research tool would be applicable for my study.

I am seeking your permission to utilize your survey tool. I believe that with some minor revisions to the questions, I can develop a strong tool to assess whether faculty resistance in transitioning service learning to online environments is due to factors associated with intention to use, perceived usefulness, perceived ease of use, technology self-efficacy, or subjective norm. Would it be possible to obtain a copy of your research instrument and may I have your permission to modify the survey to be more applicable to my dissertation topic???

I appreciate your time and I thank you in advance for your consideration of my request. I look forward to your response. Please feel free to contact me at your convenience with any questions or concerns.

Best regards,
Robin Ross

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Dean, School of Health and Public Services
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Appendix E – Intent to Use Service-eLearning Survey

Measurement Items

Integrating Service-Learning Experiences Into Online Courses Survey

Introduction: Service-learning is defined by Clayton et al. (2013) as a course or competency-based, credit bearing educational experience in which students (a) participate in mutually identified service activities that benefit the community, and (b) reflect on the service activity in such a way as to gain further understanding of the course content, a broader appreciation of the discipline, and an enhanced sense of personal values and civic responsibility.

The purpose of this study is to determine factors that may facilitate or hinder faculty who may desire to transition service-learning opportunities into online courses. Your participation in this survey will contribute to the body of knowledge of service-eLearning and provide valuable information to assist the efforts of those who are involved in decision making and who provide support to the faculty in the development of sound pedagogical practices.

Your responses are strictly confidential and will not be linked to your email address.

Part 1: Faculty Demographics

Directions: Questions 1-10 are descriptive questions. Please read each question and select the response that best describes you or your position at your institution.

1. Age:
 - 21-30
 - 31-40
 - 41-50
 - 51-60
 - Over 61

2. Gender:
 - Female
 - Male
 - Other

3. Ethnicity:
 - Caucasian
 - African American
 - Hispanic
 - Native American
 - Asian

- Other
4. Job Status:
- Full-time faculty
 - Part-time faculty
5. Years of Teaching Experience:
- Less than 1 year
 - 1-5 years
 - 6-10 years
 - 11-15 years
 - 16-20 years
 - Greater than 20 years
6. Please list your primary area of instruction.
- Business
 - Humanities/Social Sciences
 - Fine Arts
 - Mathematics
 - Science
 - Biology
 - Health Sciences
 - English
 - Public Services
 - Other
7. Institution Size:
- Less than 1,000 full-time students
 - 1,000 - 2,999 full-time students
 - 3,000 – 4,999 full-time students
 - 5,000 or greater full-time students
8. Online Education Experience:
- I have not ever taken or taught an online course
 - I have taken an online course(s)
 - I have taught or currently teach online courses
9. I currently incorporate service-learning into the following types of courses I teach:
- Seated courses
 - Online courses
 - I utilize SL in both seated and online courses
10. If you do not currently incorporate Service-learning in online courses, please indicate your level of interest in incorporating service-learning experiences in your online courses:

- Not Interested
- Somewhat interested
- Interested
- Very Interested

Part 2: Questions 11 – 32 examine the attitudes and perceptions which may impact the decision of faculty when considering the incorporation of service-learning experiences into online courses. Please read each question and select the option which best describes your intention or perception.

Intention to Use (ITU), adapted from Fishbein and Ajzen (1975)

- ITU 1 I intend to use service-eLearning when it becomes supported by my school.
 ITU 2 I intend to incorporate service-learning in my online courses.

Perceived Usefulness (PU), adapted from Davis (1989)

- PU1 Incorporating service-learning into my online courses improves my performance.
 PU2 Service-learning experiences in my online course enhances my effectiveness as an instructor.
 PU3 Overall, I find service-learning experiences effective in meeting student learning objectives in my online courses.

Perceived Ease of Use (PEOU), adapted from Davis (1989)

- PEOU1 Learning how to incorporate service-learning into an online course is easy for me.
 PEOU2 It is easy for me to become skillful in using service-learning in my online courses.
 PEOU3 My interaction in service-learning is clear and understandable in an online course.
 PEOU 4 Overall, I find it easy to incorporate Service-learning into my online course.

Subjective Norm (SN), adapted from Fishbein and Ajzen (1975)

- SN1 Those people who are important to me in my job would strongly support my using service-learning in my online course(s).
 SN2 People in my job whose opinion I value would prefer me to use service-learning in my courses.
 SN3 My peers will perceive me in a higher status if I incorporate Service-learning into my online courses.

Service-learning Self-efficacy (SE), adapted from Compeau and Higgins (1999)

- SE1 I could incorporate service-learning in my online courses if I had manuals or a template for reference.
 SE2 I could incorporate service-learning in my online courses if I had seen someone else doing it before trying it myself.
 SE3 I could incorporate service-learning into an online course if I had previously used service-learning in a seated course.
 SE4 I could incorporate service-learning into my online courses if there is technical

- assistance available for help.
- SE5 I could incorporate Service-learning into my online courses if I was more competent with technology.

Institutional Factors (IF), self-developed.

- IF1 I could incorporate service-learning in my online courses if I had more time to work on the course in which service-learning would be offered.
- IF2 I could incorporate service-learning into my online courses if I had additional help such as work-study students or graduate assistants.
- IF3 My institution has a learning management system that is user friendly, intuitive and easy to navigate.
- IF4 I would incorporate Service-learning into my online courses if the technology was more reliable.
- IF5 My institution's learning management system has adequate technical support.

Seven-point Likert scale:

- Strongly Agree
Agree
Somewhat agree
Neither
Somewhat Disagree
Disagree
Strongly Disagree

Appendix F – Institutional Review Board Application**North Carolina State University
Institutional Review Board for the Use of Human Subjects in Research Submission for New
Studies
Protocol Number 16819***Project Title*

Faculty Perceptions of Factors that Influence the Incorporation of Service-Learning Experiences
into Online Courses

*IRB File Number:**Original Approval Date:*

04/28/2021

Approval Period

04/28/2021 -

Source of funding (provide name of funder not account number):

None

*NCSU Faculty point of contact for this protocol:NB: only this person has authority to submit the
protocol*

Bartlett, James E: Educational Leadership, Policy, and Human Development (ELPHD)

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