Examining the Relationship between Community Colleges' Caring Practices and Student Engagement Behaviors

by

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DEDICATION

I dedicate my dissertation to my family. To my soul-mate, teammate, and husband, John, thank you for reminding me that this journey was for all of us and supporting me in every way possible to ensure I reached the destination. Honestly, I can say that I never would have finished without your support and encouragement. To my children, Gavin and Caroline, thank you for sacrificing time with me as I pursued this credential. I hope my efforts remind you that very little in life worth having comes without hard work, true dedication, diligence and persistence. You have to be "gritty," not just talented to achieve your goals.

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ABSTRACT

The purpose of this ex post facto study was to examine the relationship between community colleges caring practices and student engagement behaviors. For the context of this study, caring practices were designated as orientation, college success or student success courses, and welcoming college environments. Student engagement behaviors were designated as awareness and use of face-to-face tutoring, online tutoring, math, writing, and skills labs, as well as students' self-assessment of college readiness. Using a random sample of the Center for Community College Student Engagement's 2014 Survey of Entering College Student Engagement cohort, Chi-square tests of independence and bivariate correlations revealed statistically significant associations between on-campus orientations and students' awareness of tutoring services; orientation courses and students' awareness of tutoring services; college success and student success (SLS) courses and students' use of tutoring services; and students' assessment of college's welcoming environment and their self-assessment of college readiness.

CHAPTER ONE: INTRODUCTION

Overview

According to Leithwood and Louis (2012), "Leadership can be described by reference to two core functions: *providing direction* and *exercising influence*" (p. 4). The role of school leadership has become increasingly complex and dynamic, reflecting the composition of the educational system. In the educational setting of community colleges, the dynamics are incredibly complex because of the institution's open access policies and diverse student populations. Utilizing complexity science, Pascale explains, "Living systems [like businesses] cannot be directed along a linear path. Unforeseen consequences are inevitable. The challenge is to disturb them in a manner that approximates the desired outcomes" (cited in Fullan, 2001, pp. 45-46). Applying Pascale's example to education, community colleges are the living systems; the unforeseen consequences occur among the policies governing the system, practices executed within the system, and characteristics present in inhabitants of the system. These criteria are not always linear or congruent, but they are relational. Education, as a dynamic system, is characterized by complexity and interdependence. What constitutes the complexity of education is not its concept of purpose; indeed, at the heart of any organization is its mission. Educational leaders recognize that "competing priorities aside, the core elements of that mission- the reason that communities of students, faculty, and staff, especially, know and work with one another—is *learning*" (Keeling, 2014, p. 141). At its simplest form, learning serves to sustain and improve; the crux of complexity lies in the object of sustainment and improvement. In these complex conditions, educational leaders must apply an ethic of care as they direct and influence students.

Students are the obvious inhabitants of the educational system, but they are not the only inhabitants. As the dynamics of the system are relational, educational leaders are also

inhabitants and influential components of the relationship. Entities, like colleges, fit Bush's (2011) formal and bureaucratic models, which stress the importance of the hierarchical authority structure. In the bureaucratic models, "decisions and behavior are governed by rules and regulations rather than personal intiative" and these "models emphasize impersonal relationships between staff, and with clients" (Bush, 2011, p. 48). While these structures are resilient, they present resistance to change (or evolution). Swann (2009) clarifies that "From an evolutionary standpoint, the difference between an organism that learns and one that does not is that only the former develops" (p. 258). Swann's statement communicates the relational connection of variables within the learning environment. What community college leaders cannot assume is that students are the only organisms that must continue learning to develop. Undoubtedly, community college students do not arrive fully academically and socially prepared for their postsecondary environment, so they must adapt their practice to thrive and succeed. Likewise, community colleges must continue to adapt to assist the student development process.

The evolution of education, particularly at the organization of the community college, has brought ever-increasing diverse variables that make the process of preparing and educating students a challenging endeavor. As educational leaders of open-access institutions, community colleges have an ethical obligation to create an engaging environment that promotes student success. As leaders affect the climate to strengthen connections, create interdependence, and intentional care, all stakeholders in education, particularly students, reap the benefits of progress, learning, and, ultimately, well-being. Bailey, Jaggars, and Jenkins (2015) assert, "A well-functioning community college system is instrumental in improving educational equity and in efficiently developing skills and talents essential for a thriving economy and society" (p. vii).

Through the use of state and federal funding, schools operate with explicitly articulated terms of student performance. As students transition from secondary to post-secondary, certain contexts of the articulation change for many reasons. Because students have a choice to pursue a postsecondary education, an underlying assumption has been that students own all of the responsibility of learning. Basically, students have a "right to fail" or to "sink or swim" in college. Mayo (2013) asserts that "Education can no longer adopt the 'sink or swim' attitude toward students" (p. 764). Unlike university systems, community colleges serve the needs of the community, maintaining open door policies that afford access to all students. The first semester students enter college "is pivotal because the majority of attrition occurs between the first and second years" (Mayo, 2013, p. 764). As institutions of higher learning, community colleges have an ethical obligation to address the needs of their students by providing them with access to requisite resources for success. Since the community college student population is so diverse, institutions must consider how to best engage and support students.

Background

Community colleges provide open access for students. The mission of the community college is to provide relevant training and education to student that will better serve the community at large. The mission is not binary; in fact, Mayo (2013) describes the community college mission as multifaceted, which "contributes to a diverse population of students with a variety of academic preparation, learning styles, economic backgrounds, races, ages, ethnicities, and work and family obligations" (p. 765). Leaders recognize that students in the college community are participants in the relationship of learning, not only recipients; the relational paradigm is unique. College leaders serve as experts, advisors, and facilitators to students as they

develop strategies to manage their learning. While students are the working managers of their learning, in this context, they have limited experience to manage the power their choices hold. In addition to serving diverse student populations, community colleges are faced with challenges of educational reforms and movements that have demanded improved persistence, completion, and retention rates. Unfortunately, "[community colleges] are being asked to improve their performance without being able to count on additional revenue. And they are doing this in an environment of greater public scrutiny, skepticism, and criticism of college performance" (Bailey, Jaggars, & Jenkins, 2015, p. 7).

Price and Tovar (2014) note that "leading national higher educational organizations have joined in a completion commitment, setting the goal to produce an additional five million postsecondary certificates and associate degrees by 2020…" (p. 2). One of these educational organizations is the Center for Community College Student Engagement (Center). The Center administers the *Survey of Entering Student Engagement (SENSE)* to community college students across the nation as they enter the "front door" of their college experience (The Center for Community College Student Engagement [CCCSE], 2003-2018). *SENSE* results provide community college leaders with opportunities to analyze students' responses to college experiences. These data are invaluable resources for evaluating the relationship of community college's caring practices and student engagement.

Purpose of the Study

The purpose of this ex post facto quantitative study is to analyze the relationship between community colleges' caring practices and student engagement. This study will examine the effect of orientation on students' awareness of institutional support services; the effect of enrollment in student success courses on students' use of institutional support services; the effect

of students feeling welcome at the institution; their self-assessment of improving their study skills, understanding their academic strengths and weaknesses, and developing strategies to improve their test-taking ability. Analyses of caring practices relationship to student engagement behaviors will determine significance of association. If analyses of caring practices indicate statistically significant relationship to student engagement, the results will inform community college leaders of effective responses for promoting student success. Evaluating the relationship between community colleges' caring practices and students' responses as indicators of effective student engagement are a proactive measure of caring leadership.

Problem Statement

Open access to education is a core value of the community college mission. This open-door policy means relatively unrestricted access, which results in diverse student populations. Community colleges have increased demands, yet limited resources, to address the vast needs of these diverse student populations. The combination of operating with open access admission policies and limited resources to serve diverse student populations in a culture of performance requires educational leaders to develop and utilize caring practices as proactive measures of effectiveness to promote student success.

Significance of Study

Unlike university systems, community colleges serve the needs of the community, maintaining open door policies that afford access to all students. Price and Tovar (2014) assert that "Community colleges will play a critical role in the national agenda to improve the number and percentages of adults with postsecondary credentials" (p. 3). Shannon and Smith (2006) explain, "These institutions' shared commitment to access is as American as the Declaration of Independence" (p. 15). Community colleges welcome an increasingly diverse population of

students each year. As the general education demographic of community colleges reflects more of the general demographic in society, colleges have to create mechanisms for students who have specific needs as traditional and nontraditional students: "The problems caused by diversity and low academic ability among students force community colleges to assume certain roles" (Roueche & Baker, III, 1987, p. 6).

Because the identity of the learner is so diverse, institutions must analyze individual and institutional variables capable of engaging students to support and promote performance. As open-access institutions, community colleges must tailor their efforts to support students with both comprehensive and strategic approaches; they cannot afford to operate with oversimplified and inadequate methods. Since the community college's concept of mission is comprehensive, the collective's needs are complex and must be analyzed carefully.

As the individuals change, so must the institution to provide explicit care for its students: "Open access increases the demand that community colleges respond to the many special needs of the students they admit" (Roueche & Baker, III, 1987, p. 6). The aim of this study is to provide community college leaders with evidence of which caring practices have a relationship with targeted engagement behaviors associated with student success.

Theoretical Framework

The theoretical framework of this quantitative study is care ethics. Mayeroff (1971) contextualized care as pattern of help. Noddings (2012) described ethics as a practice characterized by caring, connection, and concern; she further categorized the ethic of care as a relational ethic. Rabin and Smith (2013) assert that "Care ethics is a relational ethic that recognizes the social and moral implications of all educative experiences" (p. 164). As a theory, care ethics "implies that there is moral significance in the fundamental elements of relationships

and dependencies in human life… [it] seeks to maintain relationships by contextualizing and promoting the well-being of care-givers and care-receivers in a network of social relations" (Staudt-Sander).

Shapiro and Gross (2013) cite, "Beck (1994) stressed that it is essential for educational leaders to move away from a top-down, hierarchical model for making moral and other decisions and instead turn to a leadership style that emphasizes relationships and connections" (p. 29). Shapiro and Gross (2013) credit Noddings (1992) with challenging educators to reestablish an educational hierarchy placing "care" at the top. Keeling (2014) explains the following:

> An ethic of care…is central to responsive, empathic relationships and to the functioning of most human communities (p. 143)…. [and,] no college or university can…claim to value and act according to principles of engagement and student success while neglecting students as whole human persons and without accepting certain obligations and accountability in relation to those persons. (p. 142)

For the context of this study, care is a practice; ethics are the moral principles guiding the practice of care. Basically, through this lens, the institution is the one giving care; students are those receiving care. Specifically, Joan Tronto's (1993, 2010) care ethics framework addresses four elements of care: "caring about," "caring for," "care giving," and "care receiving." The first element, *caring about*, signifies attentiveness, a willingness to identify a need for care (Tronto 1993, 2010). *Caring for* clarifies responsibility, a willingness to act and address need for care (Tronto 1993, 2010). *Care giving* requires competence, an ability to address the need for care (Tronto 1993, 2010). *Care receiving* evaluates responsiveness, an understanding of others' position of need and how well care provided meets need (Tronto 1993, 2010; Engster, 2007).

Applied to Tronto's element of *caring about*, the community college's open-door philosophy and policy indicates the institution's willingness to identify the collective community's needs. The community college fits Tronto's element of *caring for* in its willingness to address the needs of individuals who comprise the collective. By providing academic and social student support services and instruction, the community college fits Tronto's element of *care giving.* As accredited institutions of higher learning that operate under continuous improvement, community colleges must analyze students' response to support, which fits Tronto's element of *care receiving*.

Community College Mission and Practices Operationalized with Tronto's Care Ethics

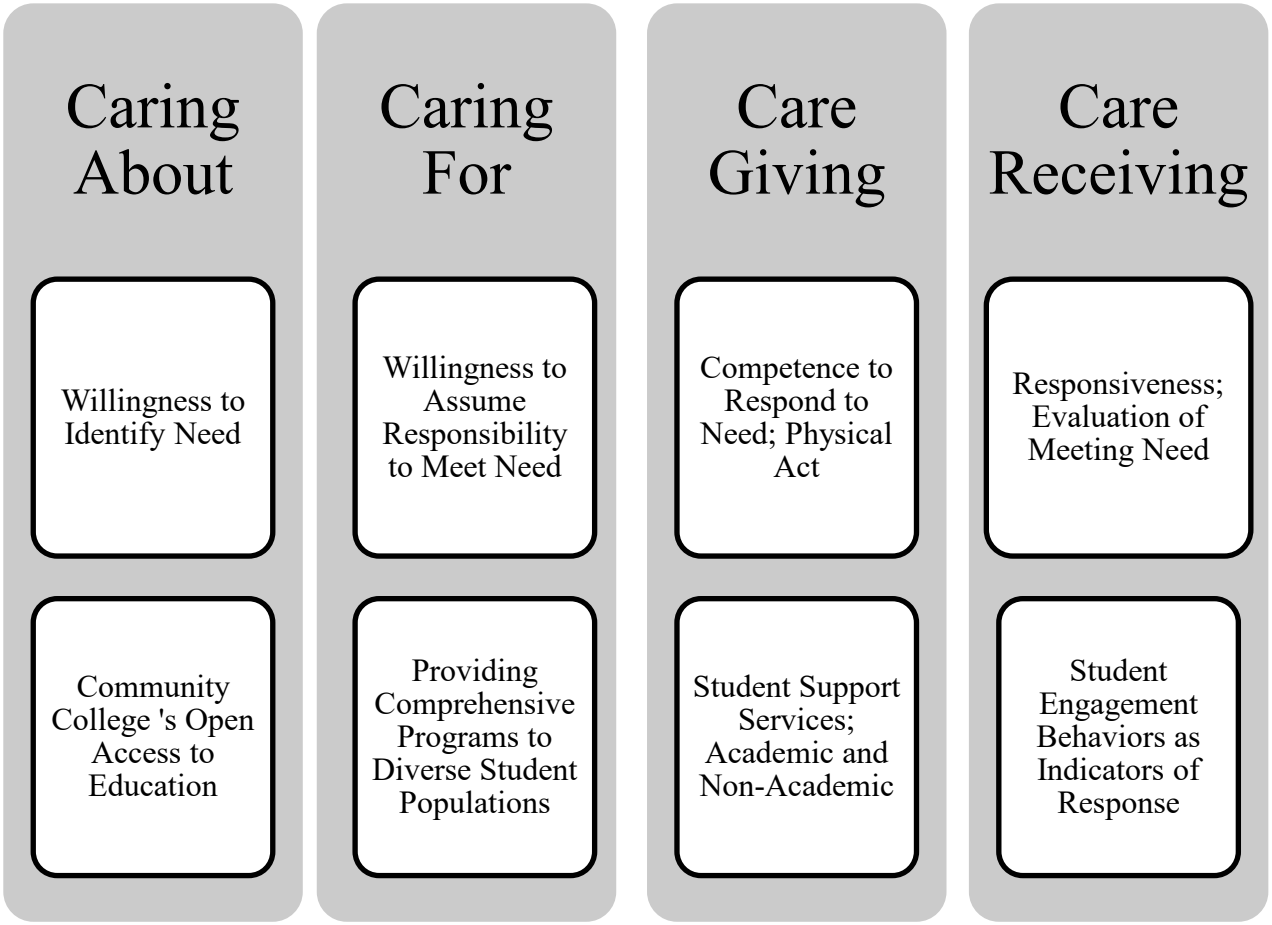

Figure 1 Community College Mission and Practices Operationalized through Tronto's (1993, 2010) Care Ethics Phases

Tronto (2010) addresses the concepts of politics, plurality, and purpose or purposiveness situated within institutional care processes and policies. Contextually, Tronto (2010) describes politics as the power relations inside and outside the organization and agreement of common purpose; plurality as the coexistence of many diverse possibilities and conditions; and purposiveness as the "awareness and discussion of the ends and purposes of care" (p. 162). While education is not a life-saving measure, students do receive a service of care from the instructors and the educational institution. Students have the power to make choices about enrollment that have consequences they may not understand. This dynamic creates an unequal distribution of power, so true reciprocity is not possible in the student-to-instructor and student-to-institution relationship. Students are not capable of responding with equal power and position. Consequently, the relationship involves a differential of vulnerability between those who need care and those who provide care.

Keeling (2014) examines the current relation of institution and learner, in his article, "An Ethic of Care in Higher Education: Well-Being and Learning." He identifies universal themes in the ethic of care philosophies of Beck, Gilligan, Held, and Tronto:

> paying attention; noticing with empathy others and their circumstances; accepting responsibility to act on what is noticed, which recognizes human connectedness and interdependence; assuring ability, capacity, and competency—that is, being prepared to respond, and respond effectively; and responding, which accepts the principle of differential vulnerability (a richer concept than simple power differentials; it holds that not everyone is able to respond in the same ways) and does not require reciprocity (actions taken on behalf of another do not require equal or complementary actions in return). (Keeling, 2014, p. 143)

Community college leaders have to examine more than student learning outcomes when making decisions. To mete out learning is a dangerous approach to the educational mission. Starratt (2004) describes this type of learning as "generally superficial and largely decontextualized from student experience and the life of the community" (p. 2). Starratt warns that "inauthentic learning" does not prepare students for their future as adults; ultimately, this compromises authentic experiential learning. Learning should be for the sake of individual and collective progress, not mere progression: "Progression involves moving from state of affairs to a *different* one; progress involves moving from one state of affairs to a *better* one" (Swann, 2009, p. 258).

As Rebore (2014) states, "The study of ethics is an extremely complex enterprise because the subject matter is human conduct" (p. 5). Within the context of education, this complex enterprise of care ethics "must concern itself with the effectiveness of its efforts to meet needs, but also with the motives with which care is provided" (Held, 2004, p. 145). The motives of community colleges should be aligned with its mission of serving the needs of society in local and global contexts.

In her article, "High Morale in a Good Cause," Noddings (2014) describes the vital vision in the current state of education as lacking a sense of greater purpose. Noddings believes collegiality, creativity, and continuity are the avenues to increase the morale in schools, creating a sense of renewal: "A school is not just a center for the production of learning. It is a place to which people become attached" (Noddings, 2014, p. 16). Ultimately, Noddings (2014) states, "The truest aims of education [are] to produce people who are morally good, intellectually competent, socially sensitive, spiritually inquisitive, and committed to living full and satisfying

lives" (p. 15). These aims must be accomplished through explicitly articulated policies and practices that acknowledge the relational dynamic of care.

Research Questions

1. What is the relationship between community college students' participation in orientation and their knowledge of available institutional tutoring services?
    a. What is the relationship between community college students' participation in an online orientation and their knowledge of face-to-face tutoring?
    b. What is the relationship between community college students' participation in an online orientation and their knowledge of online tutoring?
    c. What is the relationship between community college students' participation in an online orientation and their knowledge of math, writing, and skills labs?
    d. What is the relationship between community college students' participation in an on-campus orientation and their knowledge of face-to-face tutoring?
    e. What is the relationship between community college students' participation in an on-campus orientation and their knowledge of online tutoring?
    f. What is the relationship between community college students' participation in an on-campus orientation and their knowledge of math, writing, and skills labs?
    g. What is the relationship between community college students' participation in an orientation course and their knowledge of face-to-face tutoring?
    h. What is the relationship between community college students' participation in an orientation course and their knowledge of online tutoring?
    i. What is the relationship between community college students' participation in an orientation course and their knowledge of math, writing, and skills labs?

2. What is the relationship between community college students' enrollment in a student or college success (SLS) course and their use of institutional support services?
    a. What is the relationship between community college students' enrollment in a student or college success (SLS) course and their use of face-to-face tutoring?
    b. What is the relationship between community college students' enrollment in a student or college success (SLS) course and their use of online tutoring?
    c. What is the relationship between community college students' enrollment in a student or college success (SLS) course and their use of math, writing, and skills labs?
3. What is the relationship between community college students feeling welcome at institution and their self-assessment of college readiness (e.g., improving their study skills; understanding their academic strengths and weaknesses; developing strategies to improve their test-taking ability)?

Assumptions

It is assumed that

1. All community college SENSE survey administrators adhered to the Center for Community College Student Engagement sampling and administration guidelines.
2. All community college students completing SENSE survey accurately reported their experiences.
3. Data set is representative of first-time, first-year community college student populations.

Limitations

1. The sample of this study includes only member community colleges of the CCCSE.
2. The sample of this study reflects a wide variance in reporting community college size, ranging from small to extra-large institutions.

3. The sample of this study reflects a wide variance in reporting community college geographical setting.
4. Data set cannot be manipulated as it is secondary.
5. Findings can be generalized to 2014 SENSE cohort.

Delimitations

1. The sample is randomized from the 2014 SENSE cohort.
2. The 2014 SENSE cohort is comprised of three years of SENSE data (2012, 2013, and 2014) from 267 community colleges in 39 states.
3. The sample consists of a 25% random sample of the total 2014 SENSE cohort observations.

Definitions

Caring Practices- For the context of this study, caring practices are community college mechanisms intended to connect first-time, first-year students with resources to support their college success; specifically, orientation, college success and student success courses, and welcoming environment are caring practices examined in this study.

Center for Community College Student Engagement- The Center for Community College Student Engagement (Center) is the "umbrella organization for survey research, focus group work, and related services for community and technical colleges interested in improving educational quality through strengthened student engagement and student success" established in 2001 by the University of Texas' College of Education (CCSSE).

Community College- A community college is defined institutions primarily awarding Associate in Arts and Associate in Science as the highest degree. In 24 states, community colleges are permitted to grant bachelor's degrees designated to address workforce needs (Fulton, 2018).

First Time in College (FTIC) or First Time, First Year - Students "attending any institution for the first time at the undergraduate level. Includes students enrolled in the fall term who attended college for the first time in the prior summer term. Also includes students who entered with advanced standing (college credits earned before high school graduation)" (Broyles, National Center on Educational Statistics [NCES], 1995).

First-Year Experience Courses-Seminar course designed with in-class and out-of-class activities for first-year and freshman students (CCCSE, 2014).

Open Access- philosophy and policy of community colleges which provides postsecondary educational opportunities to all members of a community (Nevarez & Wood, 2010; Mullin, 2017).

Orientation- An intentional, formal experience developed by community college leaders to provide new students with information about various college services, departments, and networks of support (CCCSE, 2014; Mack, 2010).

Non-Academic Support Services – "Services, interventions, and informal activities that help students address the social, cultural, and otherwise implicit demands of college. These activities are not explicitly academic (in that they do not provide basic skills) but instead are intended to help students navigate the academic world of higher education" (Karp, 2011, p. 3).

Student Engagement – For the context of this study, student engagement is the measure of student connection with community college resources to support student success. Students' awareness of tutoring services, use of tutoring services, and self-assessment of college readiness (e.g., ability to improve study skills, understand their academic strengths and weaknesses, and develop strategies for test-taking ability) are measures of engagement behaviors examined in this study.

Student Services- "Conglomerate of campus operations which focus on the technical aspects of students' attendance (e.g., outreach, orientation, registration, enrollment, financial aid, assessment, counseling, judicial affairs); campus life operations of colleges, which encourage students' social integration into the campus community…" (Nevarez & Wood, 2010, p. 14).

Student Success Courses- Courses that "provide new students with information about the college they attend, assistance in academic and career planning, and an introduction to techniques for improving study habits and other personal skills" (Community College Research Center [CCRC]).

Survey of Entering Student Engagement – The Survey of Entering Student Engagement (SENSE) is "designed specifically to focus on the "front door" experiences of entering students and help colleges identify areas to improve student engagement and thereby improve student success and persistence" (Waiwaiole, Bohlig, & Massey, 2016, p. 45).

Tutoring- "Tutoring is academic assistance that is provided outside of class, either in one-on-one setting, group setting, or via technology" (CCCSE, 2014, p. 4).

Summary

Community colleges are open access institutions that serve incredibly diverse student populations. Community college students arrive with varying degrees of academic and social preparation. Engaging students in the college setting is a critical requirement of caring community college leaders. In the current climate of increasing performance and retention pressures, community colleges maximize connections between students and support services to improve effectiveness for the purpose of student success. Chapter Two will examine literature relevant three core components of this study: Community Colleges, the Center for Community College Student Engagement, and Caring Practices.

CHAPTER TWO: LITERATURE REVIEW

Introduction

This chapter organizes literature review in three sections: community colleges, the Center for Community College Student Engagement, and caring practices. As Figure 1 indicates, the community college open-access mission and service to diverse populations align with Tronto's (1993, 2010) care ethic phases of "caring about" and "caring for." care ethics, the section on community colleges connects the open-access mission to "caring about." Established to provide community college leaders with data to evaluate the relationship of meeting students' needs, the Center's Survey of Entering Student Engagement (SENSE) delivers means to capture and measure evidence of student engagement; this evaluation provides indicators of "care receiving." Caring practices of orientation, student success or college success courses, and welcoming environments to engage students serve as actions of "care giving."

Community Colleges

Designed to serve the evolving demands of American society, the institution of the community college has transformed since its inception. Dr. Bumphus, president and CEO of the American Association of Community Colleges, describes the community college's ability to evolve to serve community needs as the beauty of the institution (AACC, 2018). Characterized by its accessibility, affordability, and comprehensive services, the community college is an essential fiber of American society: "Community colleges have experienced tremendous growth…This growth has occurred not only in the numbers of students and colleges but also in the missions and the role of community colleges in American society" (Tillery & Deegan, 1985, p. 1). Examining the history and evolving mission of the community college and student

populations provides the context for leaders to employ caring practices to engage diverse student populations.

Historical Development of Community Colleges

The impetus for the establishment of a junior college is traced to the Morrill Acts of 1862 and 1890 (Cohen & Brawer, 1989; Drury, 2003; Kasper, 2002; Nevarez & Wood, 2010). Drury (2003) explains Morrill Acts of 1862 and 1890 expanded educational access. Cohen and Brawer (1989) clarify that the Morrill Acts of 1862 and 1890 supported the establishment of universities in every state that offered citizens an alternative to private colleges as they "pioneer[ed] the idea of service to the broader community through their agricultural and general extension divisions" (p. 2). The expanding offerings attracted diverse populations (Cohen & Brawer, 1989). Nevarez and Wood (2010) trace the vision of the community college to both progressive and elitist motives. "…Several nineteenth- and early twentieth-century educators wanted the universities to abandon their freshman and sophomore classes and relegate the function of teaching adolescents to a new set of institutions, to be called junior colleges" (Cohen & Brawer, 1989, p. 5). The dualistic motives of increasing educational access to populations while restricting university access to populations capture the competing values constructing the community college identity.

Throughout the twentieth century, the community college experienced several transformations. Scholars use varying descriptions to signal these transformations, but the characterizations of transformational themes are consistent: the community college continually evolved its role as a response to local, regional, and national demands. Though scholars identify the causes leading to the rise of the community college to the nineteenth century, the date of the first officially founded college falls at the turn of the twentieth century. In 1901, Joliet Community College was founded becoming nation's first junior college (Drury, 2003; Kasper,

2002; Nevarez & Wood, 2010). Nevarez and Wood (2010) refer to 1901-1920 as The Origins Period of the community college. Community colleges were established as a way for the United States to address its need to have a skilled work force to remain competitive globally, and for increasing high school graduates to meet the needs of communities locally (American Association of Community Colleges [AACC], 2018; Tillery & Deegan, 1985). Referred to as junior colleges, these institutions were extensions of high schools (Kasper, 2002, p. 15; Cohen & Brawer, 1989). Tillery and Deegan (1985) characterize the community college's role as an extension of high schools as the First Generation.

Nevarez and Wood (2010) refer to 1920-1940 as the Maturation Period for community colleges because they became recognized as separate entities from secondary institutions. The formation of the American Association of Junior Colleges (AAJC) and advanced accreditation served as indicators of the community college institution's legitimacy (Nevarez & Wood, 2010). Tillery and Deegan (1985) reference the shifting role from extension of high schools to its own entity as a junior college as the Second Generation.

Nevarez and Wood (2010) designate 1940-1960 as the Credence Period for community colleges due to national recognition by presidential administrations, federal funding for veterans through G.I. Bill (1944), shifting social values of access to education, expanding educational offerings in type and format, and numerous legislative acts. Drury (2003) explains, "The Truman Commission Report in 1947 called for the establishment of a network of public community colleges that would charge little or no tuition, provide cultural centers, serve the local areas in which they served, and offer a comprehensive curriculum." Clearly established community-centered-and-driven influences characterize the Third Generation of the community college.

Nevarez and Wood (2010) refer to 1960-1980 as the Equal Opportunity Period "due to the exponential growth experienced in the community colleges, especially from nontraditional student populations (e.g., minority students, adult students, low income students)" (p. 40). Drury (2003) connects the W. K. Kellogg Foundation's grant series with the creation of the comprehensive community college model. Tillery and Deegan (1985) identify the qualifier of *comprehensive* as the distinguishing feature of the Fourth Generation of the community college. Kasper (2002) reports that enrollment more than doubled from 1 million in 1965 to 2.2 million in 1970 (p. 15). Increased enrollment was attributed to baby boomers' age (Kasper, 2002; Nevarez & Wood, 2010), the nation's growing economy, public's increasing support, and university's inflexible infrastructure (Nevarez & Wood, 2010). Cohen & Brawer (1989) state, "Probably the simplest overarching reason for the growth of community colleges is that an increasing number of demands were being placed on the schools at every level" (p. 2). Community colleges became defined by their open access, but this "policy of admitting students without regard to their skill level and without providing services to support their success was referred to as the *right to fail*" (Nevarez & Wood, 2010, p. 41). Enrollments continued to increase due to parents' goal for children to attend college, and students' desire to avoid draft selection for Vietnam War (Kasper, 2002). Unfortunately, access to education did not yield successful outcomes. Nevarez and Wood (2010) note that "disastrously high attrition rates" permeated community colleges during this time. As a response, community colleges emphasized support services.

Nevarez and Wood (2010) label 1980-2000 as the Accountability and Assessment Period: "As law makers sought increased accountability from community colleges, funding began to be tied to success rates (e.g., graduation, persistence). These success rates failed to account for the variety of students (e.g., full-time, part-time, high school dropouts) that the community college

serves" (p. 43). Tillery and Deegan (1985) designate this period as the Fifth Generation. During this time, the community college focused efforts on functions including student services and expanded offerings. Eaton (1994) described these as "evening and weekend colleges, special programs, on-site instruction, and credit for experience" (cited in Nevarez & Wood, 2010, p. 42).

Nevarez and Wood (2015) refer to 2000-present as the Millennial Period. Levinson (2005) clarifies that "Geller (2001) suggests that a sixth generation should be added to Tillery and Deegan's typology: the learning community college, modeled after the work of Terry O'Banion (1999)" (p. 51). This period includes the community college's centennial anniversary; 2001 marked 100 years for Joliet Community College (Drury, 2003; Kasper, 2002; Nevarez & Wood, 2010). This expansion is marked by the presence of a community college or branch "located within a reasonable proximity to every community in the nation" (Nevarez & Wood, 2015, p. 44). The Internet has provided community colleges with a mechanism for additional flexibility through the offering of hybrid and online courses. Today, over 1,100 community colleges serve over 12 million students each year (Bumphus, AACC, 2018).

Diversity of Community College Student Populations

Cohen and Brawer (1989) utilize two adjectives to describe community college student populations: *number* and *variety*. Dougherty, Lahr, & Morest (2017) note, "In good part because of their broad mission and open-door ethos, U.S. community colleges tend to attract many more working class, minority, and older students than do public and private universities" (p. 5). Cohen and Brawer (1989) assert that the community college attracted student populations that were not served by traditional higher education:

> those who could not afford the tuition; who could not take the time to attend a college on a full-time basis; whose ethnic background had constrained them from participating; who

> had inadequate preparation in the lower schools; whose educational progress had been interrupted by some temporary condition; who had become obsolete in their jobs or had never been trained to work at any job; who needed a connection to obtain a job; who were confined to prisons, physically handicapped, or to otherwise unable to attend classes on a campus; or who were faced with increased leisure time (p. 22).

Traditional college students are those graduating from high school with a diploma, enrolling in college, and depending on parents or guardians for support; in terms of age, these students are 18-24 years old (CCCSE, 2018). By comparison, the National Postsecondary Student Aid Study identified the following seven student traits of students classified as nontraditional: "first generation status, delayed entry, part-time status, off-campus employment, financial independence, dependents/single parenthood, and absence of a high school diploma" (cited in Cavote & Kopera-Frye, 2007, p. 479). Cavote and Kopera-Frye (2007) note additional traits of nontraditional students as commuting, low socio-economic status, minority status, and older at time of enrollment. Because traditional and nontraditional traits cover scopes of wide-ranging life and academic skills and experiences, the student populations need assistance in various topics.

Wirt and Jaeger (2012) examined the American Association of Community College's (AACC) "Fast Facts" report to analyze student characteristics. In 2012, the report indicated that the most student populations in community colleges were not reflective of their university counterparts; indeed, "Community college students are considered nontraditional, meaning that they are older, financially independent, do not live at school, and attend school part-time" (Wirt & Jaeger, 2012, p. 981). Within the last four years, the AACC has added that while community

colleges still serve a majority of nontraditional students, the traditional student population and dual enrollment population have been increasing.

According to the American Association of Community Colleges (AACC), community college students represent 41% of all undergraduates in the United States who were enrolled in the 2015 fall term (Fast Facts). In 2015, 40% of the students enrolled in community colleges were first-time freshman and in 2016, 36% were first generation to attend college (Fast Facts, AACC, 2018). In 2015, over 58% of community college students received financial aid and 34% received PELL (Fast Facts, AACC, 2018). The average age of community college students was 28; fifty-one percent of students enrolled in community colleges were 21 years old or younger; 29% were ages 22-39, and 10 % were 40 and older (Fast Facts, AACC, 2018).

Challenges of the Educational Reforms

Educational reforms since the 1980s have shifted the focus, which no longer includes access alone; instead, community colleges are accountable for student success (Nevarez & Wood, 2010). Performance base funding has raised community college professional acceptance of accountability. The Student Right-to-Know (SRK) and Campus Security Act of 1990 signaled this shift of focus to performance outcomes (Bailey, Jaggars, & Jenkins, 2015). The 1990 SRK Act created stronger articulation between funding and performance measures for postsecondary institutions. In addition to creating a visibility-of-accountability emphasis, the 1990 SRK Act created conditions for defining graduation in rates (Bailey, Jaggars, & Jenkins, 2015, p. 5). Bailey, Jaggars, & Jenkins (2015) attribute the "national focus on postsecondary outcomes" to low graduation rates, social values connecting education to employability and wage, discrepancy between students' stated goals and actual completion, increasing costs of tuition, and America's loss of rank in international comparisons of educated countries (pp. 6-7). Shapiro and Gross

(2013) explain that the Great Recession of 2008-2009 presented a period of economic tension. Characterized as variables of sustained economic tension, increasing unemployment rates, bank failures, home foreclosures, and personal bankruptcies, "the downturn in our economy means decreased revenues for public expenditures…[resulting] in severe pressure on school budgets…Public higher education has not been immune from budget cutting from state capitals anxious to cut expenses" (Shapiro & Gross, 2013, p. 52). Funding avenues present in the form of educational reforms. Factors of increasing costs and decreasing retention, persistence and completion rates have resulted in significant higher education reforms.

Performance Funding Models

As a response to these variables, state legislatures have used performance funding as a reform measure in higher education. Researchers designate Performance Funding 1.0 and Performance Funding 2.0 as funding models that differ from traditional enrollment-based models (Bailey, Jaggars, & Jenkins, 2015). The delineation of PF 1.0 to PF 2.0 indicates a shift from performance indicators providing a "bonus" over base funding to performance indicators determining college's base funding. Hillman, Tandberg, and Fryar (2015) describe performance funding models as an effort "to reorient the state oversight and accountability environment for public colleges and universities" (p. 502). A review of performance-funding, institutional, and student performance characteristics suggests that performance-funding does have its merit; however, the effectiveness is relative in terms of persistence and not strongly correlated to graduation and completion.

In their 2014 article, "State Higher Education Performance Funding: Data, Outcomes, and Policy Implications" education researchers Tandberg and Hillman describe state performance funding as a type of incentive; specifically, this is an incentive that links funding to

performance outcomes: "States measure 'performance' in various ways, including student retention, graduation rates, student scores on licensure exams, job placement rates, faculty productivity, and campus diversity" (p. 223). Though there are numerous categories of measures, essentially, these measures base the performance of the institution on indicators of individual student performance. Tandberg and Hillman (2014) assert that "Researchers have had difficulty finding a significant relationship between performance funding and improved institutional performance" (p. 23). The authors attribute this lacking correlation to increasing variations of student diversity, ambiguous definitions of performance, and incongruent state data and institutional data reporting systems within higher education. Specifically, performance-funding in higher education has been complicating factors that prevent or restrict its effectiveness. Tandberg and Hillman (2014) cite researchers Dougherty and Reddy (2013) whose study "identified a number of obstacles to effective performance funding including inappropriate measures, instability in funding indicators and measures, the brief duration of some programs, inadequate funding, institutional resistance, and gaming of the system" (p. 227). In order to overcome these obstacles, the authors assert the following:

> In higher education, we must understand whether and to what extent public four-year colleges will respond to state performance-funding programs. It also requires state policy makers to have a more complete understanding of what colleges can (and cannot) do to support students through graduation (Tandberg & Hillman, 2014, p. 239).

College Completion Initiatives

National initiatives to address low graduation, retention, and persistence rates included those of President Obama, Bill and Melinda Gates Foundation, Lumina Foundation, and 21st-Century Commission on the Future of Community Colleges (CCCSE, 2016). A consistent theme

across these initiatives is the focus of community college completion rates. Lumina Foundation's Achieving the Dream: Community Colleges Count (ATD) initiative was "designed to increase the academic success of community college students by building a "culture of evidence" in which administrators…would use data to identify barriers to student success and develop reform strategies to overcome those identified barriers" (Bailey, Jaggars, & Jenkins, 2015, p. 8).

The Center for Community College Student Engagement

In 2001, the Center for Community College Student Engagement (the Center) was established as a research and service organization through The University of Texas at Austin's College of Education; the Center serves "as an umbrella organization for survey research, focus group work, and related services to community and technical colleges interested in improving educational quality through strengthened student engagement and student success" (Center for Community College Student Engagement, 2003-2018; Waiwaiole, Bohlig, & Massey, 2016, p. 45). In 2008, the increased community college member participation in the Center's research prompted its move off the University of Texas's campus to accommodate increased operational demands. The Center's mission is to provide practitioners and policy makers with research on effective practices to promote student success (Waiwaiole, Bohlig, & Massey, 2016).

Development of Survey of Entering Student Engagement Data (SENSE)

In 2001, the *Community College Student Survey of Engagement (CCSSE)* was developed as part of the Community College Leadership Program at the University of Texas at Austin (CCCSE, 2003-2018). The *CCSSE*, a sister of the *National Survey of Student Engagement (NSSE)*, receives guidance for survey development and administration from a National Advisory Board on community colleges and a Technical Advisory Panel of experts in research and higher

education. McClenney (2007) reported "*CCSSE*'s analyses (Marti, 2007) document the reality that community colleges lose large numbers of students during their first term and first year of college" (McClenney, 2007, p. 143). In 2016, the National Student Clearinghouse Research Center reported that approximately 40% of community college students drop out before their second year (NSCRC, 2016). As a response to address this phenomenon, *CCSSE* developed the *Survey of Entering Student Engagement (SENSE)* as a resource for community colleges "to college, analyze, and report information about institutional practices and student behaviors in the first few weeks of college" (McClenney, 2007, p. 144). Waiwaiole, Bohlig, & Massey (2016) state, "*SENSE*, developed in 2007, was designed specifically to focus on the "front door" experiences of entering students and help colleges identify areas to improve student engagement and thereby improve student success and persistence" (p. 45).

Focus on Student Engagement

A critical term in The Center for Community College Student Engagement's name and mission is *engagement*. The Center (2003-2018) asserts that "[s]tudent learning, persistence, and attainment in college are strongly associated with student engagement," describing research findings as "unequivocal." Student engagement is "an umbrella term for a family of ideas rooted in research on college students and how their college experiences affect their learning and development" (McCormick, Kinzie, & Gonyea p. 47).

Zepke and Leach (2010) developed a conceptual organizer for student engagement by synthesizing extensive research from 93 different studies conducted in ten countries (p. 167). The organizer includes two major categories: research perspectives and proposals for action found in literature. Four types of research perspectives from student engagement research studies were identified as "student motivation; transactions between teachers and students;

institutional support; and engagement for active citizenship" (Zepke & Leach, 2010, p. 167). From a research perspective, Zepke and Leach (2010) describe institutional support as providing environments conducive to learning: this support is outlined with actions of "Ensur[ing] institutional cultures are welcoming to students from diverse backgrounds[;] Invest[ing] in a variety of support services [; and,] Adapt[ing] to changing student expectations" (p. 169).

Wolf-Wendel, Ward, and Kinzie (2009) sought to distinguish among terms of engagement, involvement, and integration for purposes of research. After interviewing major theorists, they conclude, "the construct of student engagement points to activities on the part of the individual student and the institution that are related to the desired outcomes of the college" (p. 414). These activities take place in the educational environment. Engström and Tinto (2008) conducted a "systematic, multi-institutional, longitudinal four -year study" (p. 47) to explore the effect of learning communities on low-income, under-prepared students' success. Sampling students from 19 colleges selected from 11 different states, (CCCSE) survey model, National Student Clearinghouse data, and institutional data to examine the relationship between students' engagement and performance. After analyzing quantitative data from two comparison groups from a sample of over 5000 students, Engström and Tinto (2008) used qualitative methods to examine how students understood their experiences. Their studies revealed that student populations in learning communities persisted to the following term as a rate of almost 10 percent greater than these student populations enrolled in comparison classes who were not part of learning communities (Engström & Tinto, 2008, p. 47). From interviews, researchers shared that students attributed their motivation to persist to their mastery of skills; in addition, students "…spoke of becoming more aware of their needs and responsibilities as learners and themselves

as college students. They felt that they *belonged* in college and had the ability to succeed" (Engström & Tinto, 2008, p. 49).

Caring Practices

The ethic of care includes "caring about," "caring for," "care giving" and "care receiving" as critical phases (Tronto, 1993, 2010). The ethic of care is a useful frame for the community college (Figure 1). Within the context of this phrase, care giving is a physical act, and care receiving is the response to the act, as well as degree to which the act of care meets the need of those for whom care is given (Tronto, 1993, 2010; Engster, 2007). Recognizing the need to evaluate how students respond to services and developing mechanisms to promote student success serve as evidence of caring practices. Community college's institutional mechanisms of non-academic support developed as measures to support student success are practices of care. Specifically, the Center's promising practices of orientation, first-year experience course, student success course, and tutoring services are deemed as caring practices for the context of this study.

Community College Students' Need for Non-Academic Support

Karp (2011) explains that "[d]espite their best efforts, community colleges continue to see low rates of student persistence and degree attainment, particularly among academically vulnerable students" (p. 1). Karp (2011) defines *academically vulnerable* as "students from backgrounds that are correlated with low levels of postsecondary success, including those who are academically underprepared, from underrepresented minority groups, students with low socioeconomic status, and students who have low levels of parental education" (p.1). Karp explains that academic interventions as a response to improve student persistence and retention rates in community colleges have not yielded the intended results; consequently, she hypothesizes that students have other types of needs that must be met to encourage their success.

Karp (2011) identifies non-academic support as "services, interventions, and informal activities that help students address the social, cultural, and otherwise implicit demands of college. These activities are not explicitly academic…but instead are intended to help students navigate the academic world of higher education" (p. 3). Non-academic structured activities encourage academic success by establishing "a symbiotic and multiplicative relationship between academic interventions, such as tutoring and developmental education, and non-academic supports" (p.2). Karp (2011) sought "to identify the processes by which non-academic supports can help students remain enrolled in college, earn good grades, and earn a credential" (p. 2). Karp (2011) aimed "to provide practitioners with a better understanding of the elements necessary for successful non-academic support efforts" (p. 2). Jenkins (2011) recommends colleges utilize cross-functional committees to map students' experiences from their initial interaction with the institution to the completion to determine "momentum indicators" in the path.

The Center's Promising Practices

From 2011-2014, the Center for Community College Student Engagement conducted exhaustive reporting to determine which high-impact practices were "promising practices" of engagement to promote student success. The Center identified 13 practices in three categories of actions prompting success: planning, initiating, and sustaining (Figure 2).

Figure 2. The Center for Community College Student Engagement's Promising Practices (2012). Adapted from Center for Community College Student Engagement. (2012). *A Matter of Degrees: Promising Practices for Community College Student Success (A First Look).* Austin, TX: The University of Texas at Austin, Community College Leadership Program.

Jenkins (2011) cites the Community College Survey of Student Engagement (CCSSE) and the Survey of Entering Student Engagement (SENSE) as "invaluable [tools] in better understanding students' experiences with the college." (p. 35). Based on his analysis, Jenkins (2011) recommended activities aligned with the Center's Promising Practices that have "potential to improve student outcomes on a substantial scale" (p. 36). These activities include the following:

> Requiring orientation for all new students, with in-person orientation (as opposed to online)…Training of front-line staff involved in student registration, placement testing, financial aid, and advising to ensure that incoming students get consistent messages about the intake process, their potential for success in college, how to acclimate to college, and what support services are available. Requiring first-time college students to take a "first-year experience" student success course around which initial advising is structured. (p. 36)

Indicated in bold on Figure 2, orientations, first-year experience courses, student success courses, and tutoring services are deemed caring practices for the context of this study.

Orientations

Orientations are often referenced in connection with first-year and student success courses. Mack (2010) frames orientations as intentional experiences that help college students understand the interrelationship of college services and students' role: "College orientation programs encapsulate the essence of their institutions by introducing new students to the academic life, culture, traditions, history, people, and surrounding communities. The goal is to provide individuals with a holistic view of the new college experience" (p. 4).

Ellis-O'Quinn (2012) recognizes first-year student orientation as a tool that colleges and universities have utilized to address student retention. Ellis-O'Quinn (2012) explains that while orientation is a widely-used tool, "there is a lack of current research, especially at the community college level, to indicate whether orientation programs are achieving desired results" (p. 51). She further identifies course format of orientation and geographical setting of college as areas lacking research. The purpose of Ellis-O'Quinn's (2012) ex post facto study was "to identify the impact of course delivery format on success measures" (p. 51). The researcher analyzed student data from student populations enrolled at a community college in Virginia in 2006, 2007, and 2008. Ellis-O'Quinn's (2012) findings contradicted literature on the relationship between orientations and student enrollment and retention; in fact, her "findings concluded that students who did enroll in an orientation course their first semester were not more likely to reenroll in the Spring Semester, in comparison to the students who did not enroll in an orientation course" (p. 54). The researcher explains that a lack of literature on rural community colleges provides no opportunity to support or refute the findings (Ellis-O'Quinn, 2012). Ellis-O'Quinn (2012)

explains Carnegie classifications of college settings as rural, suburban, and urban provide researchers opportunities to analyze diversity within each classification's unique characteristics.

First-Year Experience and Student Success Courses

Over forty years ago, the University of South Carolina initiated its University 101 Seminar (Mayo 2013). Intended to improve retention and graduation, universities have used First-Year Seminar to help students transition. Founded by John W. Gardner and colleagues, the National Resource Center for the First-Year Experience and Students in Transition serves as a leading authority and resource on first-year students. In 2006, Porter and Swing published "Understanding How First-Year Seminars Affect Persistence" which includes a table of seminar types. Using an adapted form of Swing, Barefoot, Gardner, and Pica's definitions, Porter and Swing (2006) identify the five First-Year Seminar themes as transition, special academic, discipline, remedial, and mixed format. Simply, transition-themed courses focus on transition skills related to student engagement and success; special-academic themed courses focus on interdisciplinary topics and exploration of subjects not related to transition; discipline-themed courses focus on content or discipline-specific topics and are taught by content-experts; remedial-themed courses focus on underprepared students who are considered high risk and include intensive study and life skills instruction; and mixed-format designates institutions whose courses use more than one theme (Porter & Swing, 2006).

Mayo (2013) outlines essential components of the First-Year Experience Seminar, one being faculty-to-student interaction that occurs inside and outside the classroom. The purpose of interaction is to create connection. Wirt and Jaeger (2014) assert, "A fundamental aspect of student engagement in the campus community is the interaction students have with faculty" (p. 980). Citing Astin's (1985) student involvement theory, Wirt and Jaeger (2014) explain that

increasing students' personal contact with faculty is the optimal method of engaging students in the college community and improve learning.

Gerdes and Mallinckrodt (1994) conducted a longitudinal study on the emotional, social, and academic adjustments of college students. Findings indicated that academic ability was not as critical of a predictor for student retention as once believed; the study contended that emotional and social factors have significant correlations to students' academic adjustments (Gerdes and Mallinckrodt, 1994). Twenty years later, Sparkman, Maulding, and Roberts (2012) conducted a study on non-cognitive predictors of student performance. Their results revealed that while traditional academic indicators of grade point average and performance on standardized tests did serve as predictors of college success, these variables to do not correlate to college graduation (Sparkman, Maulding, and Roberts, 2012).

The First Year Experience Seminar course with a transition theme "…focus[es] on topics that ease the transition to college develop skills needed for academic success, and encourage student engagement in the full range of educational opportunities" while the special-academic theme First Year Experience Seminar course focuses on academic themes other than transition (Porter & Swing, 2006, p. 94). Zerr and Bjerke's (2016) article, "Using Multiple Sources of Data to Gauge Outcome Differences Between Academic-Themed and Transition-Themed First-Year Seminars" compares the two types of first-year seminar (FYS) courses for relative effectiveness using a mixed-method study. Zerr and Bjerke's direct measures of first-to-second year persistence, grade point average, and survey data reveal no significant difference between the two FYS's. Indirect measures collected from focus groups and written feedback suggest students in academic-themed first-year seminars are more engaged; respectively, these students are more likely to have academic success, which yields stronger retention and graduation rates.

In "Student Academic Outcomes after Completing a First-Year Seminar," authors Klatt and Ray (2014) examine the effects of the FYS courses offered at the College of Agricultural and Life Sciences at the University of Wisconsin-Madison. Klatt and Ray (2014) identify limitation of their study as using CALS hybrid FYS model, which cannot be generalized to other FYS themes; they also note that they did not use a true experimental design, so no causal effect of FYS can be attributed conclusively or exclusively. The seven cohorts were divided into groups that did complete the FYS and those who did not enroll or complete FYS. The findings suggest that the FYS influenced grade point average during the term that students were enrolled, but it did not have long-term influence. The results also showed that the FYS hybrid had positive correlations to students who possess strong academic potential, but the FYS did not have positive results for those students who were skills-deficient.

In "Knowing Me, Knowing You: Building Strengths Awareness, Belonging, and Persistence in Higher Education," authors Soria and Stubblefield (2015) analyze the benefits of a college-wide initiative to build students strengths awareness in their first-year as college students. Using the Clifton StrengthsFinder© survey results, students determined their individual strengths. The survey results were intended to strengthen students' sense of self-awareness; indeed, the findings revealed that students indicated greater self-awareness and confidence as a result of the survey tool. Soria and Stubblefield (2015) explain that college initiatives to raise students' self-awareness must include another component. In this study, students used the survey results as a conversation starter. The results suggested that students created connections and community using the strengths results as common language.

Zerr and Bjerke's (2016) study reveals that success is relative to the institution and its aims. Their study actually contradicts Barton and Donahue's (2009) study that concluded

transition-themed first-year seminars were more effective in terms of student engagement. What these differences indicate is that, essentially, first-year seminars must be aligned with each institution's main objectives. As each institution may have different aims or varying definitions for student success, it must determine the goal(s) that first-year seminar course will help in attaining. The customization of first-year seminars alignment to institutional culture is the lynch pin to FYS success. Klatt and Ray (2014) reveal evidence that suggests FYS courses must be customized to the needs of institutions; they cannot be generalized in terms of "one-theme-fits-all." Their findings also suggest that students may need some form on ongoing mentoring, even if informal, to persist. The students in FYS courses performed better for the semester that they were enrolled. The strength of the correlation weakened with time; this evidence indicates that the connection of institution and individual needs to be well-established. Permzadian and Crede (2016) co-authored a study that reported findings which suggested the First-Year Seminar type, institution type, and study type have meaningful effects and consequences on first-year students grades and retention. Essentially, institutions must tailor the FYS to meet the needs of its students and specifically define goals. The FYS courses provide colleges with an opportunity to create connections and communities among students. Using tools like surveys that are not academic is a constructive, nonjudgmental way for students to become more self-aware and connect with each other. As populations become more diverse, students may fail to recognize commonality in group composition. Arming students with a common language as they assimilate strengthens their sense of connection and developmental networks. Clark and Cundiff (2011) explain that "to be successful [,] students must feel as if they are part of the institutional community, academically and socially" (p. 618). The First-Year Experience Seminar presents students with an opportunity to form communities by building and bridging networks.

Best practices in First-Year Experience Seminar suggest courses include student-to-student connections, student-to-faculty connections, student-to-college community connections, and curricular and co-curricular connections (Kuh et al., 2005; Mayo, 2013). Using a transition-themed First-Year Experience course offers students an academic setting that is not discipline-specific**.** Soria and Stubblefield (2015) present findings from an institution that used personal strength inventories to build a common language and vocabulary among the class, as well as raise self-awareness.

Conclusion

Community colleges face an interesting challenge as their open-door policies bring highly diverse populations. In an effort to create strong connections that support students as they adapt to the college environment, community colleges execute caring practices as mechanisms to support student success. The Center for Community College Student Engagement provides Survey of Entering Student Engagement (SENSE) to capture students' responses to these caring practices as a tool for community college leaders. Chapter Three outlines the methodology of this study.

CHAPTER THREE: METHODOLOGY

The purpose of this study is to determine the relationship between community colleges' caring practices and student engagement behaviors. For the context of this study caring practices are orientation, college success and student success courses, and welcoming environment. Student engagement behaviors are students' awareness of tutoring services, use of tutoring services, and self-assessment of college readiness (e.g. ability to improve study skills, understand their academic strengths and weaknesses, and develop strategies for test-taking ability). The Center of Community College's Survey of Entering Student Engagement (SENSE) provides measures to examine for correlation.

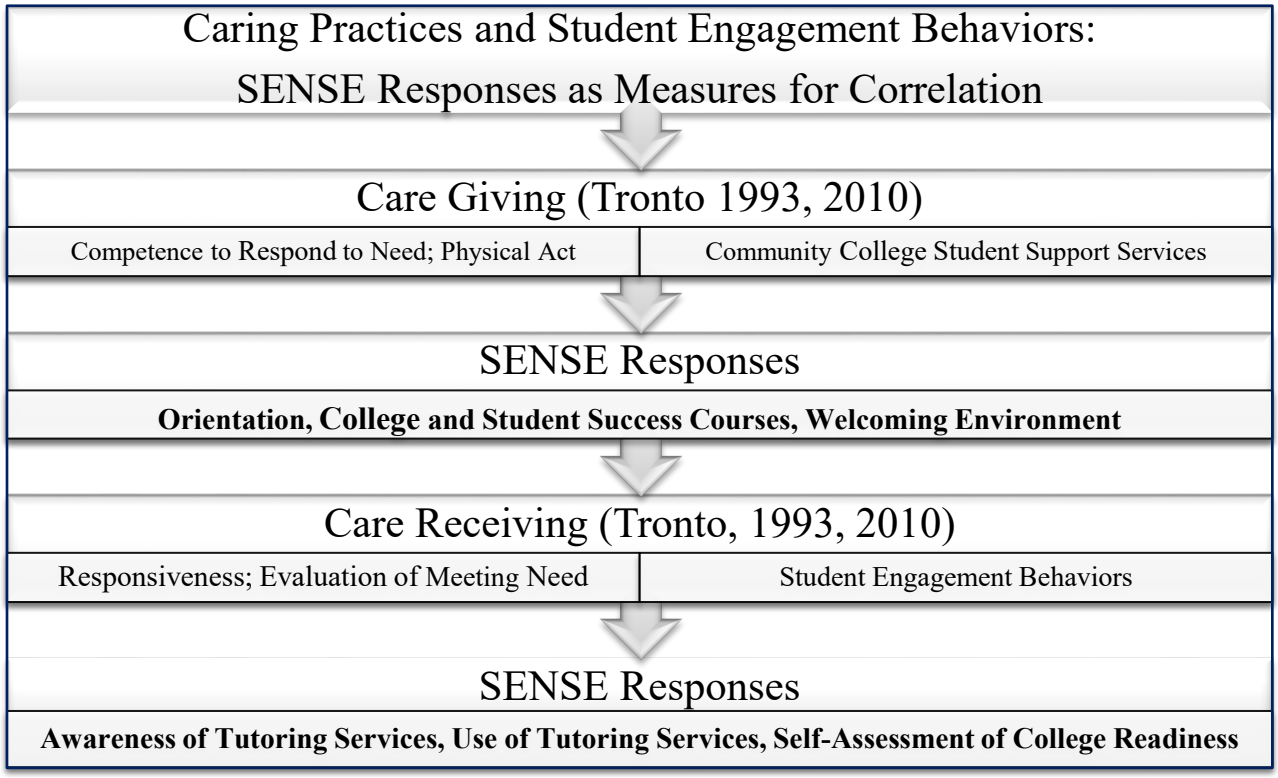

Figure 3. Caring Practices and Student Engagement Behaviors: SENSE Responses as Measures for Correlation

Research Design

Hoy and Adams (2016) define ex post facto research as "systematic empirical inquiry in which the researcher does not have direct control of the independent variable because the variable has already occurred" (p. 142). Referred to as non-experimental, ex post facto studies are more varied than experimental studies **(**Muijs, 2016). This ex post facto quantitative study is designed to examine relationship between caring practices of orientation, college success and student success courses, and welcoming environment and student engagement measures of students' awareness of tutoring services, use of tutoring services, and self-assessment of college readiness (e.g. ability to improve study skills, understand their academic strengths and weaknesses, and develop strategies for test-taking ability).

Procedures

To answer the research questions and test hypotheses of this study, the Center for Community College Student Engagement's SENSE instrument (Appendix A) was identified as an appropriate data source. Primary inquiries for data access and availability were communicated through the Center's data inquiry email. In accordance with Florida Southern College's dissertation guidelines, an Institutional Review Board (IRB) approval form was submitted, requesting expedited approval for this study as data was secondary and could not be manipulated. IRB approval was granted by Florida Southern College. In addition to Florida Southern College's IRB approval, the SENSE Data Use Agreement (Appendix C) was submitted to the Center; approval to use 2014 SENSE Cohort data was granted. **Data used with permission from the *Center for Community College Student Engagement*, *The Community College Survey of Student Engagement 2014*, The University of Texas at Austin (Appendix C).**

Survey Instrument and Sampling

The Survey of Entering Student Engagement (SENSE) is administered by the Center for Community College Engagement each year. The Center is recognized as a national authority for community college research that describes SENSE as capturing students' "front door" experiences. The SENSE is a 39-item, pencil-and-paper survey. With the intent of targeting first-time –in-college, and first-year students,

> The SENSE is administered during the fourth and fifth week of fall semester to community college students in randomly selected courses in which first –time college students are typically enrolled. These courses include all developmental reading, writing, and math courses at all levels (excluding ESL); first college-level English course(s); first college-level math course(s); and student success, college skills, first-year experience, freshman seminar, and/or orientation courses. (Center for Community College Student Engagement, 2018).

Population

The student population is from community colleges who are members of the Center for Community College Student Engagement and participated in the 2012, 2013, 2014 administration of The Community College Survey of Student Engagement (SENSE) survey (Appendix A). (Appendix B reflects **2012**- 151 colleges from 35 states; **2013**- 85 colleges from 31 states; **2014**- 114 colleges from 34 states.) Eliminating duplicate counts for colleges and states that participated in more than one year, the total cohort sample includes 267 colleges in 39 states and three provinces.

Sample

SENSE data is reported by cohorts of three years. The data for this study consists of a 25% random sample of the 2014 SENSE cohort data set, which consists of 26,203 observations (Appendix C). The 2014 SENSE cohort includes observations from 2012, 2013, and 2014 administrations. The sample is comprised of urban (33%), suburban (25%), and rural (42%) community colleges classified as small (21%), medium (24%), large (33%), and extra-large (22%) in size. The breakdown of student enrollment classifications is reported as full-time (73%), part-time (27%); developmental (60%), non-developmental (40%); and first generation (42%), non-first generation (58%). The breakdown of students' personal demographics is reported as male (45%), female (55%); and traditional age (85%), non-traditional age (15%). The sample for each research question will vary based on student responses to individual survey questions.

Variables

Specific SENSE responses to questions 11a, 11b, 11c, and 20.1d, 20.1e, 20.1f (Appendix A) will be analyzed for Research Questions 1a-f; possible responses for each question are binary, which creates dichotomous variables for correlation. SENSE questions 17e, 20.2d, 20.2e, and 20.2f (Appendix A) will be analyzed for Research Questions 2a-c; possible response for 17e (Appendix A) is binary, and responses to questions 20.2d, 20.2e, and 20.2f (Appendix A) will be transformed as binary to create dichotomous variables. Question 18a is a Likert scale and ordinal variable; Questions 12a, 12b, 14, 21a, 21b, and 21c (Appendix A) have been standardized by Center as continuous variable coded as raw college readiness benchmark. Table 1 includes SENSE items labeled as independent and dependent variables, as well as corresponding research question number and statistical test.

Table 1

Independent and Dependent Variables by SENSE Number with Research Questions and Statistical Tests

Independent Variables – listed by SENSE #	**Dependent Variables- listed by SENSE #**	**Research Question**	**Statistical Test**
11a- Attended Online Orientation	20.1.d – Aware of Face-To-Face Tutoring	1a	Chi-square
11a- Attended Online Orientation	20.1.e- Aware of Online Tutoring	1b	Chi-square
11a- Attended Online Orientation	20.1.f- Aware of Math, Writing, and Skills Labs	1c	Chi-square
11b- Attended On-Campus Orientation	20.1.d – Aware of Face-To-Face Tutoring	1d	Chi-square
11b-Attended On-Campus Orientation	20.1.e- Aware of Online Tutoring	1e	Chi-square
11b-Attended On-Campus Orientation	20.1.f- Aware of Math, Writing, and Skills Labs	1f	Chi-square
11c-Participated in Orientation Course	20.1.d – Aware of Face-To-Face Tutoring	1g	Chi-square
11c-Participated in Orientation Course	20.1.e- Aware of Online Tutoring	1h	Chi-square
11c-Participated in Orientation Course	20.1.f- Aware of Math, Writing, and Skills Labs	1i	Chi-square
17e- Enrolled in SLS Course	20.2.d- Used Face-to-Face Tutoring	2a	Chi-square
17e- Enrolled in SLS Course	20.2.e- Used Online Tutoring	2b	Chi-square
17e- Enrolled in SLS Course	20.2.f- Used Math, Writing, Skills Labs	2c	Chi-square
18a. Felt Welcome	12a, 12b, 14, 21a, 21b, 21c- Benchmarked College Readiness	3	Spearman's *rho*

Note. Variables measured for correlation using Chi-square test of independence were nominal with dichotomous values; Variables measured for correlation using Spearman's *rho* were continuous and ordinal.

Research Questions and Hypotheses

1. What is the relationship between community college students' participation in orientation and their knowledge of available institutional tutoring services?
    a. What is the relationship between community college students' participation in an online orientation and their knowledge of face-to-face tutoring?

       H_{1a}: Students' participation in an online orientation is associated with students' awareness of face-to-face tutoring services.
    b. What is the relationship between community college students' participation in an online orientation and their knowledge of online tutoring?

       $H_{1b:}$ Students' participation in an online orientation is associated with students' awareness of online tutoring services.
    c. What is the relationship between community college students' participation in an online orientation and their knowledge of math, writing, and skills labs?

       $H_{1c:}$ Students' participation in an online orientation is associated with students' awareness of math, writing, and skills labs.
    d. What is the relationship between community college students' participation in an on-campus orientation and their knowledge of face-to-face tutoring?

       $H_{1d:}$ Students' participation in an on-campus orientation is associated with students' awareness of face-to-face tutoring services.
    e. What is the relationship between community college students' participation in an on-campus orientation and their knowledge of online tutoring?

       $H_{1e:}$ Students' participation in an on-campus orientation is associated with students' awareness of online tutoring services.

f. What is the relationship between community college students' participation in an on-campus orientation and their knowledge of math, writing, and skills labs?

   $H_{1f:}$ Students' participation in an on-campus orientation is associated with students' awareness of math, writing, and skills labs.

g. What is the relationship between community college students' participation in an orientation course and their knowledge of face-to-face tutoring?

   $H_{1g:}$ Students' participation in an orientation course is associated with students' awareness of face-to-face tutoring services.

h. What is the relationship between community college students' participation in an orientation course and their knowledge of online tutoring?

   $H_{1h:}$ Students' participation in an orientation course is associated with students' awareness of online tutoring services.

i. What is the relationship between community college students' participation in an orientation course and their knowledge of math, writing, and skills labs?

   $H_{1i:}$ Students' participation in an orientation course is associated with students' awareness of math, writing, and skills labs.

2. What is the relationship between community college students' enrollment in a student or college success (SLS) course and their use of institutional support services?

   a. What is the relationship between community college students' enrollment in a student or college success (SLS) course and their use of face-to-face tutoring?

      $H_{2a:}$ Students' enrollment in an SLS course is associated with students' use of face-to-face tutoring services.

b. What is the relationship between community college students' enrollment in a student or college success (SLS) course and their use of online tutoring?

   $H_{2b:}$ Students' enrollment in an SLS course is associated with students' use of online tutoring services.

c. What is the relationship between community college students' enrollment in a student or college success (SLS) course and their use of math, writing, and skills labs?

   $H_{2c:}$ Students' enrollment in an SLS course is associated with students' use of math, writing, and skills labs.

3. What is the relationship between community college students feeling welcome at institution and their self-assessment of college readiness (e.g., improving their study skills; understanding their academic strengths and weaknesses; developing strategies to improve their test-taking ability)?

   $H_{3:}$ Students' feeling welcome at college is associated with students' self-assessment of college readiness.

Conclusion

This chapter provided an outline of the research design, procedures, data, sample, variables, and questions for this ex-post facto study. Chapter Four will present findings of statistical analysis.

CHAPTER FOUR: FINDINGS

Introduction

The purpose of this ex post facto study was to analyze the relationship between community colleges' caring practices and student engagement. For the context of this study, caring practices were defined as orientation, student success courses, and welcoming environment; indicators of student engagement were students' awareness of institutional support services, use of institutional support services, and self-assessment of college readiness. Specifically, this study examined the association of orientation and students' awareness of face-to-face tutoring, online tutoring, and math, writing, skills labs; the association of enrollment in student success courses and students' use of face-to-face tutoring, online tutoring, and math, writing, skills labs; and the association of students feeling welcome at institution and their self-assessment of college readiness.

Data Sample

The sample for this study was the 2014 SENSE Cohort, which was comprised of community colleges who are listed as members of the Center for Community College Student Engagement and who participated in the 2012, 2013, 2014 administration of the SENSE (Appendix B). The data for this study was provided by the Center for Community College Student Engagement. **Data used with permission from the *Center for Community College Student Engagement*, *The Community College Survey of Student Engagement 2014*, The University of Texas at Austin (Appendix C).** For the purpose of this study, the Center released a 25% random sample of the 2014 SENSE cohort data set, which consisted of 26, 203 observations. Eliminating duplicate counts for colleges and states that participated in more than

one year, the total sample included 267 colleges in 39 states, the District of Columbia, and two Canadian provinces.

Data Analysis

Student responses to specific items on the Survey of Entering Student Engagement or SENSE (Appendix A) were examined for correlations. Missing cases were excluded from calculations for each research question. "Chi-square (χ^2) is the critical ratio that indicates how likely the relation between categorical variables departs from the chance model" (Hoy & Adams, 2016, p.141). Chi-square tests of independence were used to examine correlation of relationship between nominal variables; if test statistic was significant at a 0.05, 0.01, or 0.001 level, Cramer's *V* was used to measure effect of association. Bivariate correlation using Spearman's *rho* correlation coefficient was used to examine relationship between continuous and ordinal variables. IBM SPSS V25 was used to run statistical analysis, as this software meets the industry standard for studies in social sciences.

Data Results

Research Question 1

The first research question focused on the relationship between community college students' participation in orientation and their knowledge of available institutional tutoring services. Student responses to SENSE survey question 11 for orientation and question items 20.1d, 20.1e, and 20.1f for knowledge of tutoring services were analyzed for correlation. SENSE survey question 11 (Appendix A) provided students with five options, of which students could select all that applied. The five options included participating in an online orientation, participating in on-campus orientation, enrolling in an orientation course, being unaware of orientation, or being unavailable to attend orientation session. Since the purpose of this question

was to determine correlation of students' who attended orientation to awareness of tutoring services, the three responses specifying orientation types of online, on campus, and orientation course were selected. Question 20.1 asked students if they knew about specific tutoring services. Three types of tutoring services were selected using Question 20.1d for face-to-face tutoring; 20.1e for online tutoring; and 20.1f for math, writing, and skills labs (Appendix A). Research Question 1 was broken into nine parts (RQ1a-RQ1i) to examine students' participation in each type of orientation for correlation to their awareness of each type of tutoring service. All variables were nominal and dichotomous. Agresti (2002, 2007), Cronk (2018), Holcomb (2009), Hoy and Adams (2016) Muijs (2011), and Pallant (2016), explain nominal variables require non-parametric measures. For research question one, the Chi-square test of independence was chosen since data met the following conditions: analysis included two nominal and mutually exclusive variables, groups were independent, cell data originated from one source, and all cell counts met minimum requirements (Cronk, 2018; Holcomb 2009).

Table 2

Descriptive Statistics for Student Sample: Orientation

Orientation Type	Attended	%	Did Not Attend	%	*N*	%
Online	3272	12.50	22931	87.50	26203	100
Campus	14687	56.10	11516	43.90	26203	100
Course	2253	8.60	23950	91.40	26203	100

Students could indicate participation in three types of orientation: online, on campus, and orientation course. Of the total sample (*N*=26,203), 56% of students selected participation in an on-campus orientation, 12.5% selected participation in online orientation, and 8.6% selected participation in orientation course.

Table 3

Descriptive Statistics for Student Sample: Awareness of Institutional Support Tutoring Services

Tutoring Type	Aware		Not Aware			
		%		%	*N*	%
Face-to-Face	20254	78.50	5536	21.50	25790	100
Online	10158	39.60	15491	60.40	25649	100
Skills Labs	19193	74.60	6527	25.40	25720	100

For this study, student responses on three types of tutoring services were selected. For the total sample (*N*=25,790), 78.5% of students indicated they were aware of face-to-face tutoring services. For the total sample (*N*=25720), 74.60% of students indicated they were aware of math, writing, and skills labs. For the total sample (*N*=25,649), 39.60% of students indicated they were aware of online tutoring services.

Research Question 1a, Hypothesis, and Results

What is the relationship between community college students' participation in an online orientation and their knowledge of face-to-face tutoring services?

H_{1a}: Students' participation in an online orientation is associated with students' awareness of face-to-face tutoring services.

Table 4

Chi Square Test of Independence Results for Comparison of Attendance in Online Orientation with Awareness of Face-to-Face Tutoring Services

Aware of Face-to-Face Tutoring		Online Orientation			Value		
		Did Not Attend	Attended	Total	χ^2	*df*	*p*
Yes	count	17734	2520	20254	0.262*	1	0.609
	expected	17722.8	2531.2	20254			
	%	87.60%	12.40%	100%			
No	count	4833	703	5536			
	expected	4844.2	691.8	5536			
	%	87.30%	12.70%	100%			
Total	count	22567	3223	25970			
	expected	22567	3223	25790			
	%	87.50%	12.50%	100%			

* 0 cells (0) have expected count less than 5. The minimum expected count is 691.84

A Chi-square test of independence was conducted to determine association between students' awareness of institution's face-to-face tutoring services and students' enrollment in an online orientation. As Table 4 indicates, the expected count for students who attended an online orientation indicating awareness of face-to-face tutoring services was 2531.2, or 12.5% compared to the actual count of 2520 or 12.4% of the of the total number of students indicating "Yes." No statistically significant relationship was found between awareness of face-to-face tutoring and enrollment in online orientation, χ^2 (1, *N*= 25,790) = 0.262, *p* = 0.609. Students' awareness of face-to-face tutoring services did not differ by their enrollment in online orientation.

Research Question 1b, Hypothesis, and Results

What is the relationship between community college students' participation in an online orientation and their knowledge of online tutoring services?

$H_{1b:}$ Students' participation in an online orientation is associated with students' awareness of online tutoring services.

Table 5

Chi Square Test of Independence Results for Comparison of Attendance in Online Orientation with Awareness of Online Tutoring Services

Aware of Online Tutoring		Online Orientation			Value			
		Did Not Attend	Attended	Total	χ^2	*df*	*p*	φ_c
Yes	count	8809	1349	10158	9.468*	1	0.002**	0.02
	expected	8888.7	1269.3	10158				
	%	86.70%	13.30%	100%				
No	count	13635	1856	15491				
	expected	13555.3	1935.7	15491				
	%	88.00%	12.00%	100%				
Total	count	22444	3205	25649				
	expected	22444	3205	25649				
	%	87.50%	12.50%	100%				

* 0 cells (0) have expected count less than 5. The minimum expected count is 1269.30

**p <0.01

A Chi-square test of independence was conducted to determine association between students' awareness of institution's online tutoring services and students' enrollment in an online orientation course. As Table 5 indicates, the expected count for students who attended an online orientation indicating awareness of online tutoring services was 1269.3 or 12.5% compared to

the actual count of 1349 or 13.3% of the of the total number of students indicating "Yes." The expected count for students who attended an online orientation indicating no awareness of online tutoring was 1935.7 or 12.5% compared to the actual count of 1856 or 12.0% of the total number of students indicating "No." A statistically significant relationship at a 0.01 level was found between awareness of online tutoring and enrollment in online orientation, χ^2 (1, N= 25,649) = 9.468, p = 0.002, Cramer's V= 0.02. Students' awareness of online tutoring services was associated with their enrollment in online orientation.

Research Question 1c, Hypothesis, and Results

What is the relationship between community college students' participation in an online orientation and their knowledge of math, writing, and skills labs?

$H_{1c:}$ Students' participation in an online orientation is associated with students' awareness of math, writing, and skills labs.

Table 6

Chi Square Test of Independence Results for Comparison of Attendance in Online Orientation with Awareness of Skills Labs

Aware of Skills Labs		Online Orientation			Value		
		Did Not Attend	Attended	Total	χ^2	*df*	*p*
Yes	count	16763	2430	19193	1.789*	1	0.181
	expected	16793.9	2399.1	19193			
	%	87.30%	12.70%	100%			
No	count	5742	785	6527			
	expected	5711.1	815.9	6527			
	%	88.00%	12.00%	100%			
Total	count	22505	3215	25720			
	expected	22505	3215	25720			
	%	87.50%	12.50%	100%			

* 0 cells (0) have expected count less than 5. The minimum expected count is 815.88

A Chi-square test of independence was conducted to determine association between students' awareness of institution's math, writing, and skills labs and students' enrollment in online orientation. As Table 6 indicates, the expected count for students who attended an online orientation indicating awareness of math, writing, and skills labs was 2399.1 or 12.5% compared to the actual count of 2430 or 12.7% of the of the total number of students indicating "Yes." The expected count for students who attended an online orientation indicating no awareness of online tutoring was 815.9 or 12.5% compared to the actual count of 784 or 12.0% of the total number of students indicating "No." No statistically significant relationship was found between awareness math, writing, and skills labs and enrollment in online orientation, χ^2 (1, *N*= 25,720) = 1.789, *p* = 0.181. Students' awareness of math, writing, and skills labs did not differ with their enrollment in online orientation.

Research Question 1d, Hypothesis, and Results

What is the relationship between community college students' participation in an on-campus orientation and their knowledge of face-to-face tutoring services?

$H_{1d:}$ Students' participation in an on-campus orientation is associated with students' awareness of face-to-face tutoring services.

Table 7

Chi Square Test of Independence Results for Comparison of Attendance in On-Campus Orientation with Awareness of Face-to-Face Tutoring Services

Aware of Face-to-Face Tutoring		On-Campus Orientation			Value			
		Did Not Attend	Attended	Total	χ^2	*df*	*p*	φ_c
Yes	count	8381	11873	20254	232.501*	1	<0.001**	0.1
	expected	8879.9	11374.1	20254				
	%	41.40%	58.60%	100%				
No	count	2926	2610	5536				
	expected	2427.1	3108.9	5536				
	%	52.90%	47.41%	100%				
Total	count	11307	14483	25790				
	expected	11307	14483	25790				
	%	43.80%	56.20%	100%				

* 0 cells (0) have expected count less than 5. The minimum expected count is 2427.12

**p <0.001

A Chi-square test of independence was conducted to determine association between students' awareness of institution's face-to-face tutoring services and students' attendance at an on-campus orientation. As Table 7 indicates, the expected count for students who attended an on-campus orientation indicating awareness of face-to-face tutoring services was 11374.1 or 56.16% compared to the actual count of 11873 or 58.6% of the of the total number of students indicating "Yes." The expected count for students who attended an on-campus orientation

indicating no awareness of online tutoring was 3108 or 56.16% compared to the actual count of 2610 or 47.1% of the total number of students indicating "No." A statistically significant relationship at a 0.001 level was found between awareness of face-to-face tutoring and attending on-campus orientation, χ^2 (1, N= 25,790) = 232.501, $p < 0.001$, Cramer's V= 0.1. Students' awareness of face-to-face tutoring services was associated with attendance in on-campus orientation.

Research Question 1e, Hypothesis, and Results

What is the relationship between community college students' participation in an on-campus orientation and their knowledge of online tutoring services?

$H_{1e:}$ Students' participation in an on-campus orientation is associated with students' awareness of online tutoring services.

Table 8

Chi Square Test of Independence Results for Comparison of Attendance in On-Campus Orientation with Awareness of Online Tutoring Services

Aware of Online Tutoring		On-Campus Orientation			Value			
		Did Not Attend	Attended	Total	χ^2	*df*	*p*	φ_c
Yes	count	4114	6044	10158	73.315*	1	<0.001**	0.05
	expected	4446.7	5711.3	10158				
	%	40.50%	59.50%	100%				
No	count	7114	8377	15491				
	expected	6781.3	8709.4	15491				
	%	45.90%	54.10%	100%				
Total	count	11228	14421	25649				
	expected	11228	14421	25649				
	%	43.80%	56.20%	100%				

* 0 cells (0) have expected count less than 5. The minimum expected count is 4446.72

**$p < 0$ .001

A Chi-square test of independence was conducted to determine association between students' awareness of institution's online tutoring services and students' attendance at an on-campus orientation. As Table 8 indicates, the expected count for students who attended an on-campus orientation indicating awareness of online tutoring services was 5711.3 or 56.2% compared to the actual count of 6044 or 59.5% of the of the total number of students indicating "Yes." The expected count for students who attended an on-campus orientation indicating no awareness of online tutoring was 8709.4 or 56.22% compared to the actual count of 8377 or 54.1% of the total number of students indicating "No." A statistically significant relationship at a 0.001 level was found between awareness of online tutoring and attending an on-campus orientation, χ^2 (1, N= 25,649) = 73.315, $p < 0.001$, Cramer's V= 0.05. Students' awareness of online tutoring services was associated with attendance at an on-campus orientation.

Research Question 1f, Hypothesis, and Results

What is the relationship between community college students' participation in an on-campus orientation and their knowledge of math, writing, and skills labs?

$H_{1f:}$ Students' participation in an on-campus orientation is associated with students' awareness of math, writing, and skills labs.

Table 9

Chi Square Test of Independence Results for Comparison of Attendance in On-Campus Orientation with Awareness of Skills Labs

Aware of Skills Labs		On-Campus Orientation			Value			
		Did Not Attend	Attended	Total	χ^2	*df*	*p*	φ_c
Yes	count	8078	11115	19193	90.286*	1	<0.001**	0.06
	expected	8407	10786	19193				
	%	42.10%	57.90%	100%				
No	count	3188	3339	6527				
	expected	2859	3668	6527				
	%	48.80%	51.20%	100%				
Total	count	11266	14454	25720				
	expected	11266	14454	25720				
	%	43.80%	56.20%	100%				

* 0 cells (0) have expected count less than 5. The minimum expected count is 2858.99

**$p < 0.001$

A Chi-square test of independence was conducted to determine association between students' awareness of institution's math, writing, and skills labs and students' attendance at an on-campus orientation. As Table 9 indicates, the expected count for students who attended an on-campus orientation indicating awareness of math, writing, and skills labs was 10786 or 56.2% compared to the actual count of 11115 or 57.9% of the of the total number of students indicating "Yes." The expected count for students who attended an on-campus orientation indicating no awareness of math, writing, and skills labs was 3339 or 56.2% compared to the actual count of 3339 or 51.2% of the total number of students indicating "No." A statistically significant relationship at a 0.001 level was found between awareness of math, writing, and skills labs and attending an on-campus orientation, χ^2 (1, N= 25,720) = 90.286, $p < 0.001$, Cramer's V= 0.06.

Students' awareness of math, writing, and skills labs was associated with attendance at an on-campus orientation.

Research Question 1g, Hypothesis, and Results

What is the relationship between community college students' participation in an orientation course and their knowledge of face-to-face tutoring services?

$H_{1g:}$ Students' participation in an orientation course is associated with students' awareness of face-to-face tutoring services.

Table 10

Chi Square Test of Independence Results for Comparison of Attendance in Orientation Course with Face-to-Face Tutoring Services

Aware of Face-to-Face Tutoring	Orientation Course				Value			
		Did Not Attend	Attended	Total	χ^2	*df*	*p*	φ_c
Yes	count	18467	1787	20254	5.342*	1	0.021**	0.01
	expected	18509.8	1744.2	20254				
	%	91.20%	8.80%	100%				
No	count	5102	434	5536				
	expected	5059.2	476.8	5536				
	%	92.20%	7.80%	100%				
Total	count	23569	2221	25790				
	expected	23569	2221	25790				
	%	91.40%	8.60%	100%				

* 0 cells (0) have expected count less than 5. The minimum expected count is 2858.99

**$p < 0.05$

A Chi-square test of independence was conducted to determine association between students' awareness of institution's face-to-face tutoring and students' enrollment in an

orientation course. As Table 10 indicates, the expected count for students who enrolled in an orientation course indicating awareness of face-to-face tutoring services was 1744.2 or 8.61% compared to the actual count of 1787 or 8.8% of the of the total number of students indicating "Yes." The expected count for students enrolled in an orientation course indicating no awareness of face-to-face tutoring was 476.8 or 8.61% compared to the actual count of 434 or 7.8% of the total number of students indicating "No." A statistically significant relationship at a 0.05 level was found between awareness of face-to-face tutoring and enrollment in orientation course, χ^2 (1, N= 25,790) = 5.342, $p < 0.05$, Cramer's V= 0.01. Students' awareness of face-to-face tutoring was associated with enrollment in an orientation course.

Research Question 1h, Hypothesis, and Results

What is the relationship between community college students' participation in an orientation course and their knowledge of online tutoring services?

$H_{1h:}$ Students' participation in an orientation course is associated with students' awareness of online tutoring services.

Table 11

Chi Square Test of Independence Results for Comparison of Attendance in Orientation Course with Online Tutoring Services

Aware of Online Tutoring		Orientation Course			Value			
		Did Not Attend	Attended	Total	χ^2	*df*	*p*	φ_c
Yes	count	9231	927	10158	5.202*	1	0.023**	0.01
	expected	9281.2	876.8	10158				
	%	90.90%	9.10%	100%				
No	count	14204	1287	15491				
	expected	14153.8	1337.2	15491				
	%	91.70%	8.30%	100%				
Total	count	23435	2214	25649				
	expected	23435	2214	25649				
	%	91.40%	8.60%	100%				

* 0 cells (0) have expected count less than 5. The minimum expected count is 876.83

**$p < 0.05$

A Chi-square test of independence was conducted to determine association between students' awareness of institution's online tutoring and students' enrollment in an orientation course. As Table 11 indicates, the expected count for students who enrolled in an orientation course indicating awareness of online tutoring services was 876.8 or 8.63% compared to the actual count of 927 or 9.1% of the of the total number of students indicating "Yes." The expected count for students enrolled in an orientation course indicating no awareness of online tutoring was 1337.2 or 8.63% compared to the actual count of 1287 or 8.3% of the total number of students indicating "No." A statistically significant relationship at a 0.05 level was found between awareness of online tutoring and enrollment in orientation course, χ^2 (1, N= 25649) = 5.202, $p < 0.05$, Cramer's V= 0.01. Students' awareness of online tutoring was associated with enrollment in an orientation course.

Research Question 1i, Hypothesis, and Results

What is the relationship between community college students' participation in an orientation course and their knowledge of math, writing, and skills labs?

$H_{1i:}$ Students' participation in an orientation course is associated with students' awareness of math, writing, and skills labs.

Table 12

Chi Square Test of Independence Results for Comparison of Attendance in Orientation Course with Skills Labs

Aware of Skills Labs		Orientation Course			Value			
		Did Not Attend	Attended	Total	χ^2	*df*	*p*	φ_c
Yes	count	17476	1717	19193	8.787*	1	0.003**	0.02
	expected	17534.1	1658.9	19193				
	%	91.10%	8.90%	100%				
No	count	6021	506	6527				
	expected	5962.9	564.1	6527				
	%	92.20%	7.80%	100%				
Total	count	23497	2223	25720				
	expected	23497	2223	25720				
	%	91.40%	8.60%	100%				

* 0 cells (0) have expected count less than 5. The minimum expected count is 564.13

**$p < 0.01$

A Chi-square test of independence was conducted to determine association between students' awareness of institution's math, writing, and skills labs and students' enrollment in an orientation course. As Table 12 indicates, the expected count for students who enrolled in an orientation course indicating awareness of math, writing, and skills labs was 1658.9 or 8.64% compared to the actual count of 1717 or 8.8% of the of the total number of students indicating

"Yes." The expected count for students enrolled in an orientation course indicating no awareness of math, writing, and skills labs was 564.1 or 8.64% compared to the actual count of 506 or 7.8% of the total number of students indicating "No." A statistically significant relationship at a 0.01 level was found between awareness of math, writing, and skills labs and enrollment in orientation course, χ^2 (1, N= 23,497) = 8.787, $p < 0.01$, Cramer's V= 0.02. Students' awareness of math, writing, and skills labs was associated with enrollment in an orientation course.

Research Question 2

The second research question focused on the relationship between community college students' enrollment in a student or college success (SLS) course and their use of available institutional tutoring services. Student responses to SENSE survey question 17e for enrollment in SLS course and survey questions 20.2.d, 20.2.e, and 20.2.f for use of tutoring services were analyzed for correlation (Appendix A). Survey responses for questions 20.2.d, 20.2.e, and 20.2.f were transformed to binary values for analysis. Research Question 2 was broken into three parts (RQ2a-c) to examine correlation between students' enrollment in SLS course and use of each type of tutoring service. Chi square test of independence was used to determine if any relationship existed between enrollment in student success course and use of tutoring services.

Table 13

Descriptive Statistics for Student Sample: Enrolled in SLS Course

	Enrolled	%	Not Enrolled	%	*N*	%
SLS Course	8977	35.60%	16233	64.40%	25210	100

Students could select that they were or were not enrolled in a college or student success (SLS) course. For this sample (N=25210), 35.6% indicated they were enrolled in an SLS course while 64.4% indicated they were not enrolled in an SLS course.

Table 14

Descriptive Statistics for Student Sample: Use of Institutional Support Tutoring Services

Tutoring Type	Used At Least Once		Never Used			
		%		%	*N*	%
Face-to-Face	4263	17.00%	20756	83.00%	25019	100
Online	1578	6.50%	22882	93.50%	24460	100
Skills Labs	9034	36.30%	15825	63.70%	24859	100

Students could select frequency of use for face-to-face, online, and math, writing, skills labs. For the purpose of this study, categories were transformed to dichotomous response option to distinguish whether students used the service at least once or never used the service. Student options of "Once," "Two or Three," or "Four or More" were combined as "Used At Least Once." For the total sample (*N*=24,859), 36.3% of students indicated that they used the math, writing, or skills labs at least once. For the total sample (*N*=25,019), 17% of students indicated that they used face-to-face tutoring services at least once. For the total sample, (*N*=24,460), 6.5% of students indicated that they used online tutoring services at least once.

Research Question 2a, Hypothesis, and Results

What is the relationship between community college students' enrollment in a student or college success (SLS) course and their use of face-to-face tutoring services?

$H_{2a:}$ Students' enrollment in an SLS course is associated with students' use of face-to-face tutoring services.

Table 15

Chi Square Test of Independence Results for Comparison of Enrollment in SLS Course and Use of Face-to-Face Tutoring Services

Used Face-to-Face Tutoring		SLS Course			Value			
		Not Enrolled	Enrolled	Total	χ^2	*df*	*p*	φ_c
Yes	count	2337	1739	4076	106.447*	1	<0.001**	0.07
	expected	2624.4	1451.4	4076				
	%	57.30%	42.70%	100%				
No	count	13214	6861	20075				
	expected	12926.4	7148.6	20075				
	%	65.80%	34.20%	100%				
Total	count	15551	8600	24151				
	expected	15551	8600	24151				
	%	64.40%	35.60%	100%				

* 0 cells (0) have expected count less than 5. The minimum expected count is 1451.43

**p <0.001

A Chi-square test of independence was conducted to determine association between students' use of institution's face-to-face tutoring services and students' enrollment in a student or college (SLS) success course. As Table 15 indicates, the expected count for students who enrolled in an SLS course indicating use of face-to-face tutoring was 1451.4 or 35.6% compared to the actual count of 1739 or 42.7% of the of the total number of students indicating "Yes." The expected count for students enrolled in an SLS course indicating no use of face-to-face tutoring was 7148.6 or 35.6% compared to the actual count of 6861 or 34.2% of the total number of students indicating "No." A statistically significant relationship at a 0.001 level was found between use of face-to-face tutoring and enrollment in an SLS course, χ^2 (1, N= 24,151) = 106.447, p < 0.001, Cramer's V= 0.07. Students' use of face-to-face tutoring was associated with enrollment in an SLS course.

Research Question 2b, Hypothesis, and Results

What is the relationship between community college students' enrollment in a student or college success (SLS) course and their use of online tutoring services?

$H_{2b:}$ Students' enrollment in an SLS course is associated with students' use of online tutoring services.

Table 16

Chi Square Test of Independence Results for Comparison of Enrollment in SLS Course and Use of Online Tutoring Services

Used Online Tutoring		SLS Course			Value			
		Not Enrolled	Enrolled	Total	χ^2	*df*	*p*	φ_c
Yes	count	904	611	1515	16.043*	1	<0.001**	0.03
	expected	976.2	538.8	1515				
	%	59.70%	40.30%	100%				
No	count	14326	7795	22121				
	expected	14253.8	7867.2	22121				
	%	64.80%	35.20%	100%				
Total	count	15230	8406	23636				
	expected	15230	8406	23636				
	%	64.40%	35.60%	100%				

* 0 cells (0) have expected count less than 5. The minimum expected count is 538.80

**p <0.001

A Chi-square test of independence was conducted to determine association between students' use of institution's online tutoring services and students' enrollment in a student or college (SLS) success course. As Table 16 indicates, the expected count for students who enrolled in an SLS course indicating use of online tutoring was 538.8 or 35.6% compared to the actual count of 611 or 40.3% of the of the total number of students indicating "Yes." The expected count for students enrolled in an SLS course indicating no use of online tutoring was 7867.2 or 35.6% compared to the actual count of 7795 or 35.2% of the total number of students

indicating "No." A statistically significant relationship at a .001 level was found between use of online tutoring and enrollment in an SLS course, χ^2 (1, N= 23,636) = 16.043, $p < 0.001$, Cramer's V= 0.03. Students' use of online tutoring was associated with enrollment in an SLS course.

Research Question 2c, Hypothesis, and Results

What is the relationship between community college students' enrollment in a student or college success (SLS) course and their use of math, writing, and skills labs?

$H_{2c:}$ Students' enrollment in an SLS course is associated with students' use of math, writing, and skills labs.

Table 17

Chi Square Test of Independence Results for Comparison of Enrollment in SLS Course and Use of Skills Labs

Used Skills Labs		SLS Course			Value			
		Not Enrolled	Enrolled	Total	χ^2	*df*	*p*	φ_c
Yes	count	5085	3580	8665	194.002*	1	<0.001**	0.09
	expected	5581.2	3083.8	8665				
	%	58.70%	41.30%	100%				
No	count	10369	4959	15328				
	expected	9872.8	5455.2	15328				
	%	67.60%	32.40%	100%				
Total	count	15454	8539	23993				
	expected	15454	8539	23993				
	%	64.40%	35.60%	100%				

* 0 cells (0) have expected count less than 5. The minimum expected count is 3083.83

**$p < .001$

A Chi-square test of independence was conducted to determine association between students' use of institution's math, writing, and skills labs and students' enrollment in a student or college (SLS) success course. As Table 17 indicates, the expected count for students who

enrolled in an SLS course indicating use of math, writing, and skills labs was 3083.8 or 35.6% compared to the actual count of 3580 or 41.3% of the of the total number of students indicating "Yes." The expected count for students enrolled in an SLS course indicating no use of math, writing, and skills labs was 5455.2 or 35.6% compared to the actual count of 4959 or 32.4% of the total number of students indicating "No." A statistically significant relationship at a 0.001 level was found between use of math, writing, and skills labs and enrollment in an SLS course, χ^2 (1, N= 23993) = 194.002, $p < .001$, Cramer's V= 0.09. Students' use of math, writing, and skills labs was associated with enrollment in an SLS course.

Research Question 3

The third research question relationship between community college students' feeling welcome at institution and their self-assessment of college readiness (e.g. placement testing, improving their study skills; understanding their academic strengths and weaknesses; developing strategies to improve their test-taking ability). Student responses to SENSE survey question 18a for feeling welcome and questions 12a, 12b, 14, 21a, 21b, and 21c for college readiness were analyzed for correlation (Appendix A). SENSE Question 18a was a Likert-scale response, creating an ordinal variable. The six survey items for college readiness were benchmarked as standardized score; this transformed the variables to one continuous scale variable. Spearman's rho correlation was used to determine if any relationship exists between students' feeling welcome and their self-assessment of college readiness.

Research Question 3, Hypothesis, and Results

What is the relationship between community college students' feeling welcome at institution and their self-assessment of college readiness (e.g. placement testing, improving their

study skills; understanding their academic strengths and weaknesses; developing strategies to improve their test-taking ability)?

$H_{3:}$ Students' feeling welcome at college is associated with students' self-assessment of college readiness.

Table 18

Spearman's rho Correlation of Students' College Readiness and Feeling Welcome

		College Readiness	Welcome
College Readiness	r_s	1	.247**
	Sig. (2-tailed)		0
	N	26195	25934
Welcome	r_s	.247**	1
	Sig. (2-tailed)	0	
	N	25934	26195

**$p < 0.001$

A bivariate correlation using Spearman *rho* correlation coefficient was calculated for the relationship between students' indication of college readiness and feeling welcome at college campus. As Table 18 indicates, the correlation between students' self-assessment of their college readiness and feeling welcome at college was statistically significant at a .001 level, (r_s (1) = 0.247, $p < 0.001$). There was a modest positive relationship between the two variables. Students' sense of college readiness rating increased as they feel more welcome at college campus.

Conclusion

The purpose of this study was to examine the relationship between community colleges' caring practices and student engagement behaviors. Data from a random sample of the 2014 SENSE (Appendix A) Cohort was analyzed for correlations using IBM SPSS V25. Research

questions 1a-i and 2a-c required Chi-square tests of independence for analysis; research question 3 required bivariate correlation using Spearman's *rho*. Analyses did not provide statistically significant evidence to support hypotheses H_{1a} and H_{1c}; online orientation was not associated with students' awareness of face-to-face tutoring or math, writing, and skills labs. Analyses did provide statistically significant evidence to support hypotheses H_{1b}, H_{1d}, H_{1e}, H_{1f}, H_{1g}, H_{1h}, H_{1i}, H_{2a}, H_{2b}, H_{2c}, and H_3; online orientation was associated with students' awareness of online tutoring; campus orientations and orientation courses were associated with students' awareness of face-to-face and online tutoring, as well as math, writing, and skills labs; SLS courses were associated with students' use of face-to-face tutoring, online tutoring, and math, writing, and skills labs. Students' perception of college's welcoming environment had a modest positive association with students' self-assessment of college readiness.

CHAPTER FIVE: SUMMARY, CONCLUSION, AND RECOMMENDATIONS

Introduction

This chapter provides a summary of this ex post facto study that sought to examine the relationship between community colleges' caring practices and student engagement behaviors. Evaluating data results from Chapter 4, this chapter draws conclusions about the findings of this study. This chapter also discusses implications for community colleges' practices and recommendations for further research.

Summary of the Study

Overview of the Problem

Community colleges are unique educational systems that operate with "open-door" policies. By design, community colleges serve diverse student populations with wide-ranging needs. Educational reforms prioritize performance and completion; these indicators are connected to funding in many states. Community colleges have to increase performance without additional revenue or resources (Bailey, Jaggars, & Jenkins, 2015). The Center of Community College Student Engagement created the Survey of Entering Student Engagement (SENSE) to provide community college leaders with evidence to support institutional effectiveness goals to improve student success. The combination of operating with open-access admission policies and limited resources to serve diverse student populations in a culture of performance requires educational leaders to develop and utilize caring practices as proactive measures of effectiveness to promote student success.

Purpose Statement

The purpose of this study was to analyze the relationship between community colleges' caring practices and student engagement behaviors. The aim of this study was to provide

community college leaders with evidence of which caring practices have a relationship with targeted student engagement behaviors associated with student success.

Research Questions

1. What is the relationship between community college students' participation in orientation and their knowledge of available institutional support services?
    a. What is the relationship between community college students' participation in an online orientation and their knowledge of face-to-face tutoring?
    b. What is the relationship between community college students' participation in an online orientation and their knowledge of online tutoring?
    c. What is the relationship between community college students' participation in an online orientation and their knowledge of math, writing, and skills labs?
    d. What is the relationship between community college students' participation in an on-campus orientation and their knowledge of face-to-face tutoring?
    e. What is the relationship between community college students' participation in an on-campus orientation and their knowledge of online tutoring?
    f. What is the relationship between community college students' participation in an on-campus orientation and their knowledge of math, writing, and skills labs?
    g. What is the relationship between community college students' participation in an orientation course and their knowledge of face-to-face tutoring?
    h. What is the relationship between community college students' participation in an orientation course and their knowledge of online tutoring?
    i. What is the relationship between community college students' participation in an orientation course and their knowledge of math, writing, and skills labs?

2. What is the relationship between community college students' enrollment in a student or college success (SLS) course and their use of institutional support services?
    a. What is the relationship between community college students' enrollment in a student or college success (SLS) course and their use of face-to-face tutoring?
    b. What is the relationship between community college students' enrollment in a student or college success (SLS) course and their use of online tutoring?
    c. What is the relationship between community college students' enrollment in a student or college success (SLS) course and their use of math, writing, and skills labs?
3. What is the relationship between community college students feeling welcome at institution and their self-assessment of college readiness (e.g., improving their study skills; understanding their academic strengths and weaknesses; developing strategies to improve their test-taking ability)?

Review of Methodology

This ex post facto study examined the relationship between caring practices of orientation, college success and student success courses, and welcoming environment with student engagement measures of students' awareness of tutoring services, use of tutoring services, and self-assessment of ability to improve study skills, understand their academic strengths and weaknesses, and develop strategies for test-taking ability. The Center for Community College Student Engagement provided research data from the 2014 SENSE cohort (Appendix B). As Table 1 indicates, specific SENSE (Appendix A) responses to questions 11, 20.1d, 20.1e, 20.1f were analyzed for Research Questions 1a-f; questions 17e, 20.2d, 20.2e, and 20.2f were analyzed for Research Questions 2a-c; questions 18a and raw college readiness benchmark comprised of responses to questions 12a, 12b, 14, 21a, 21b, and 21c were analyzed

for correlation. Chi square tests of independence and bivariate correlation using Spearman's *rho* were utilized to determine if any statistical significance of relationship could be found (Figure 3).

Summary of Findings

Research questions for this study were framed to examine the relationship between community colleges' caring practices and student engagement behaviors. The three main research questions addressed relationships of orientation to awareness of institutional support services; SLS course to use of institutional support services; and welcoming environment to students' self-assessment of college readiness. For clarity and specificity, two of the three main questions were broken down to several questions to examine relationship between explicit caring practice and engagement response.

Research Question 1: Relationship between Orientation and Awareness of Institutional Services

For this study, online orientations, on-campus orientations, and orientation courses were examined as community colleges' caring practices. Descriptive statistics revealed on-campus orientation as the highest attended type with 56% of the sample (*N*= 26,203) indicating that they did attend an orientation session on a college campus. Only 12.5% of the sample indicated that they attended an online orientation, and an even lower 8.6% reported participating in an orientation course. For awareness of institutional support services, 78% of the sample (*N*=25,790) indicated that they were aware of face-to-face-tutoring services, and 74.6% (*N*=25720) indicated that they were aware of math, writing, and skills labs. Comparatively, only 39.6% (*N*=25,649) of students indicated an awareness of online tutoring services.

Research Questions 1a, 1b, and 1c examined the relationship of online orientation to students' awareness of face-to-face tutoring (RQ1a), online tutoring RQ1b), and math, writing, and skills labs (RQ1c). Chi-square tests of independence revealed no association between online

orientation and students' awareness of face-to-face tutoring or math, writing, or skills labs; however, there was a statistically significant association of online orientation and students' awareness of online tutoring.

Research Questions 1d, 1e, and 1f examined the relationship of an on-campus orientation to students' awareness of face-to-face tutoring (RQ1d), online tutoring (RQ1e), and math, writing, and skills labs (RQ1f). Chi-square tests of independence revealed statistically significant associations between students' attendance at an on-campus orientation and students' awareness of each type of tutoring service.

Research Questions 1g, 1h, and 1i examined the relationship of orientation courses to students' awareness of face-to-face tutoring (RQ1g), online tutoring (RQ1h), and math, writing, and skills labs (RQ1i). Chi-square tests of independence revealed statistically significant associations between students' attending orientation courses and students' awareness of each type of tutoring service.

Research Question 2: Relationship between College or Student Success (SLS) Course and Use of Institutional Support Services

For this study, college or student success (SLS) courses were examined as community colleges' caring practices. Use of face-to-face tutoring, online tutoring, and math, writing, and skills labs were examined as student engagement behaviors. Thirty-five percent of the student sample (*N*=25,210) indicated that they were enrolled in an SLS course. Thirty-six percent of the student sample (*N*=24,859) indicated that they had used the math, writing, and skills labs, while only 17% (*N*=25,019) used face-to-face tutoring, and only 6.5% (24,460) used online tutoring.

Research Questions 2a, 2b, and 2c examined the relationship of students' enrollment in an SLS course and their use of face-to-face tutoring (RQ2a), online tutoring (RQ2b), and math,

writing, and skills labs (RQ2c). Chi-square tests of independence indicated statistically significant association between SLS courses and students' use of all tutoring services.

Research Question 3: Relationship between Welcoming Campus and Students' Self-Assessment of College Readiness

For this study, a welcoming environment was examined as a community college caring practice. Self-assessment of college readiness using the raw benchmark college readiness variable was examined as student engagement behavior. Bivariate correlation using Spearman's *rho* revealed a modest positive relationship between students' rating the college campus as welcoming and assessing themselves as college ready.

Discussion of Findings Related to the Literature

In its 2008 report, *Imagine Success: Engaging Entering Students (2008 SENSE Field Test Findings)*, the Center for Community College Student Engagement reported the following:

> Community colleges today typically lose about half of their students prior to the students' second year of college…14% of entering students do not earn a single college credit in their first term…15% of students who earn no credits in their first term persist to the following term. (p. 3)

In 2016, the American Association of Community College released *Trends in Community College Enrollment and Completion Data* reported the 2009 cohort only 38.2% of community college students completed a program within six years (Juszkiewicz, 2016, p. 6). Essentially, a little more than one out of three students who enroll in community colleges will complete their program. These statistics underscore the need for community college leaders to engage students immediately as they enter the college environment.

Orientation, student success courses, and welcoming environments serve as examples of caring practices to engage students. The findings of this study reveal that online orientations were associated only with students' awareness of online tutoring services. On-campus orientations were associated with students' awareness of face-to-face tutoring, online tutoring and math, writing, and skills labs. Orientation courses were associated with students' awareness of face-to-face tutoring, online tutoring, and math, writing, and skills labs. College success and student success (SLS) courses were associated with students' use of face-to-face tutoring, online tutoring, and math, writing, and skills labs. Students' indication of college having a welcoming environment was associated with students' self-assessment of their college readiness. Comparatively, this study's findings reveal face-to-face orientations, SLS courses, and welcoming college environments held the greatest significance of all associations with statistical significance at .001 level.

What is surprising is that while orientation has been associated as a caring practice associated with student success, only 56%, or a little more than half, of the students in the 2014 SENSE cohort sample reported attending some form of orientation. Student success courses had the strongest association with students' use of math, writing, and skills labs, but only 35% of the 2014 SENSE cohort sample reported enrollment in an SLS course. The Center (2008) asserted, "The value of engaging students—and in particular, making sure this engagement begins early in their college experience—is well documented" (p. 4). Unfortunately, community college leaders examine data to discover that "what they *know*—about their students and about strong educational practice—is disconnected from what they *do*" (Center, 2008, p. 4).

Recommendations for Community College Administrators

Community college administrators of student services departments should employ orientations to ensure entering students are aware of the services in place to support them in their new environment. Administrators of student service departments should design orientation modality and substance with intent to target explicit needs of their student populations. The findings of this study revealed on-campus orientations were associated with students' awareness of institutional support services face-to-face tutoring, online tutoring, and math, writing, and skills labs designed to help them persist and succeed in their academic pursuits. Based on the findings of this study, this researcher recommends community college administrators of student service departments design orientations as on-campus experiences with a face-to-face component to optimize students' awareness of institutional support services and students' engagement with college environment. Exclusively online orientations should not be used as primary or exclusive modality of orientation for entering community college students as online orientations did not reveal association of students' increased awareness of tutoring services.

In addition to orientations, community colleges should offer student success courses to entering students. While findings of this study revealed on-campus orientations and orientation courses were associated with increased student awareness of institutional support services of face-to-face tutoring, online tutoring, and math, writing, and skills labs, college and student success (SLS) courses were associated with students' use of these services. Student success courses should be designed with activities that encourage or require students to access the support services at least once to ensure developing students know how to access resources within their environment. Student success course instructors should consider inviting staff of student service programs as guest speakers in their SLS courses; this effort could familiarize students

with tutoring support. Though the analyses of this study used students' awareness and use of tutoring services as dependent variables to examine for relationship with orientations and student success courses, these practices provide student service departments with platforms to broadcast information about additional institutional support programs.

As leaders of open-access institutions, community college administrators, specifically, vice-presidents and deans of academic and student services, must remember that providing students with access to learning is a mission that by design implies students are welcomed to access the opportunity. Establishing a welcoming environment for students to enter is critical. The results of this study revealed a positive correlation between students' identifying the college environment as welcoming and students' indicating a higher self-rating of their college readiness. As many states have now imposed performance-funding models, community college presidents, vice-presidents, and deans should recognize the benefits of these caring practices as both philosophically fundamental and fiscally influential to their operation.

Community colleges' institutional research officers should partner with comprehensive research organizations like the Center for Community College Student Engagement as support mechanisms for extensive data collection and analyses. The Center administers the Community College Survey of Student Engagement (CCSSE) each year to student populations in college-credit courses. Participating community colleges' institutional research officers should use SENSE and CCSSE data to compare students' impressions of the colleges' environment and services beyond the first semester. Correlated with enrollment, retention, and completion data, students' SENSE and CCSSE survey results will inform community college administrators of student service areas that need to be strengthened and showcased as caring practices.

Recommendations for Future Research

The Center for Community College Student Engagement published student survey data in three-year cohorts. Since 2008, the Center has conducted SENSE administrations each year, resulting in three total cohorts: 2011, 2014, and 2017. The 2014 SENSE cohort was used for this study. Since the 2017 cohort will provide a third collective, the Center's SENSE data could be the basis for a longitudinal study tracking trends in community colleges' caring practices. The 2014 cohort sample examined for this study reported 56% attended some a face-to-face orientation. Since there are statistically significant associations with students being aware of tutoring services when they attended a face-to-face orientation, increased orientation offerings could bring increased awareness and use of tutoring services.

College success and student success (SLS) courses were associated with students' use of tutoring services. The SENSE did provide students' response options to distinguish modality of SLS course. Future survey administrations should allow students to indicate if they were enrolled in an SLS course offered as face-to-face, online, or hybrid modality to determine if student responses differ or vary by modality of SLS course.

Online modality offers students who are unable to attend face-to-face college courses access to educational programs. Characterized with open-door policies, community colleges were designed to increase access. Presenting essentially unrestricted access to community college programs could counteract community college completion initiatives. Researchers should analyze community college student completion rates not only by program, but by program modality to inform state departments of education, legislators, community college administrators, and accrediting agencies as they develop, propose, approve, and implement online programs.

Conclusion

Engaging students in the first semester is critical. More than engaging students, connecting them with resources like tutoring is a proactive measure to ensure students persist to complete their goals. Caring practices of orientation, college success and student success (SLS) courses, as well as welcoming college environments make a difference to the community college students who encounter them: "To promote greater student success, institutions have to take seriously the notion that the failure of students to thrive in college lies not just in the students but also in the ways they construct the environments in which they ask students to learn" (Engström & Tinto, 2008, p. 50). As open-access institutions, community colleges have an ethical obligation to equip students with the resources requisite to help them achieve success. As Engstrom and Tinto (2008) state, "Access without support is not opportunity" (p. 50).

Dedication to continuous improvement negates complacency. Continuous improvement requires reflection, evaluation, and revision. As the individuals change, so must the institution. Institutions must create a direct connection that cements students' commitment to the college and as part of a collective: "The construct of student engagement points to activities on the part of the individual student and the institution that are related to the desired outcomes of the college" (Wolf-Wendel, Ward, & Kinzie, 2009, p. 414).

In the climate of accountability that comes with conditions of funding, postsecondary institutions must tailor their efforts to support students with both wide-ranging and targeted approaches: "The idea of student success is of the learning and development of a whole, integrated person. An institutional ethic of care supports, and indeed is essential to, the achievement of that idea" (Keeling, 2014, p. 144). Applying an ethic of care, community college

leaders have to recognize the importance of creating congruence and connections within and among all in the educational environment.

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APPENDIX A: SURVEY OF ENTERING STUDENT ENGAGEMENT (SENSE)

SENSE
Survey of Entering Student Engagement
a CCCSE initiative

SURVEY
OF ENTERING STUDENT ENGAGEMENT

Instructions: It is essential that you use a No. 2 pencil to complete this survey. Mark your answer as shown in the following example:

CORRECT MARK ●
INCORRECT MARKS ✓ ✗ ⬭ ⊙

1. **Have you taken this survey in another class THIS SEMESTER/QUARTER?**
   ○ Yes ○ No

2. **Thinking about THIS SEMESTER/QUARTER, how would you describe your enrollment *at this college*?**
   ○ Full-time ○ Less than full-time

3. **Did you begin college at this college or elsewhere?**
   ○ Started here ○ Started elsewhere

4. **While in high school, did you earn college credit for one or more courses?** (Mark all that apply)
   ○ No
   ○ Yes, at this college
   ○ Yes, at a different college
   ○ Yes, at my high school

5. **In addition to taking courses at this college, were/are you also enrolled at a 4-year college or university during YOUR FIRST SEMESTER/QUARTER?**
   ○ Yes ○ No

6. **How many semesters/quarters have you been enrolled *at this college*?**
   ○ This is my first semester/quarter
   ○ This is my second semester/quarter
   ○ This is my third semester/quarter
   ○ This is my fourth semester/quarter
   ○ I have been enrolled more than four semesters/quarters

7. **How many courses did you enroll in for YOUR FIRST SEMESTER/QUARTER *at this college*?**
   ○ One ○ Three
   ○ Two ○ Four or more

8. **Did you add or drop any classes within the FIRST THREE WEEKS OF YOUR FIRST SEMESTER/QUARTER *at this college*?**
   ○ Yes, without discussing my decision with a college staff member or instructor
   ○ Yes, after discussing my decision with a college staff member or instructor
   ○ No, I did not add or drop any courses

9. **Of the courses you enrolled in during YOUR FIRST SEMESTER/QUARTER *at this college*, how many did you drop after the first day of class?**
   ○ None ○ Two ○ Four or more
   ○ One ○ Three

10. **When did you register for your courses for YOUR FIRST SEMESTER/QUARTER *at this college*?** (Mark only ONE)
    ○ More than one week before classes began
    ○ During the week before classes began
    ○ During the first week of classes
    ○ After the first week of classes

PLEASE DO NOT MARK IN THIS AREA

SERIAL #

11. **The following statements are about this college's orientation for new students.** (Mark all that apply)
- ○ I took part in an online orientation prior to the beginning of classes
- ○ I attended an on-campus orientation prior to the beginning of classes
- ○ I enrolled in an orientation course as part of my course schedule during my first semester/quarter at this college
- ○ I was not aware of a college orientation
- ○ I was unable to participate in orientation due to scheduling or other issues

12. **This set of items asks you about your earliest experiences *at this college*. To respond, please think about your experiences FROM THE TIME OF YOUR DECISION TO ATTEND THIS COLLEGE THROUGH THE END OF THE FIRST THREE WEEKS OF YOUR FIRST SEMESTER/QUARTER.**

	Yes	No
a. Before I could register for classes I was *required* to take a placement test (COMPASS, ASSET, ACCUPLACER, SAT, ACT, etc.) to assess my skills in reading, writing, and/or math	○	○
b. I took a placement test (COMPASS, ASSET, ACCUPLACER, SAT, ACT, etc.)	○	○
c. I was exempt from taking a placement test at this college	○	○

13. **My placement test scores indicated that I needed to take a Developmental course (also referred to as Basic Skills, College Prep, etc.) in the following areas.** (Mark all that apply)
- ○ Didn't take a placement test
- ○ Developmental Reading
- ○ Developmental Writing
- ○ Developmental Math
- ○ Didn't place into any Developmental courses

14. **This college *required* me to enroll in classes indicated by my placement test scores during my FIRST SEMESTER/QUARTER.**
○ Yes ○ No

15. **With regard to financial assistance (scholarships, grants, or loans, etc.) to help with your college costs, mark a response for each of the following items.**

	Yes	No
a. I applied for financial assistance (scholarships, grants, or loans, etc.)	○	○
b. I was notified I was eligible to receive financial assistance (scholarships, grants, or loans, etc.)	○	○
c. I received financial assistance funds (scholarships, grants, or loans, etc.) before classes began	○	○

16. **When did you first apply for financial assistance.** (Mark only ONE)
- ○ 3 or more months before classes began
- ○ 1 to 2 months before classes began
- ○ Less than 1 month before classes began
- ○ After classes began
- ○ I did not apply for financial assistance

17. **In which of the following types of courses were you enrolled during your FIRST SEMESTER/QUARTER *at this college*?** (Respond to each item)

	Enrolled	Not enrolled
a. Developmental Reading (also referred to as Basic Skills, College Prep, etc.)	○	○
b. Developmental Writing (also referred to as Basic Skills, College Prep, etc.)	○	○
c. Developmental Math (also referred to as Basic Skills, College Prep, etc.)	○	○
d. An English course taught specifically for students whose first language is not English (ESL, ESOL)	○	○
e. A course specifically designed to teach skills and strategies to help students succeed in college (e.g., a college success or student success course)	○	○
f. An organized "learning community" (two or more courses that a group of students take together)	○	○

18. **This set of items asks you about your earliest experiences *at this college*. To respond, please think about your experiences FROM THE TIME OF YOUR DECISION TO ATTEND THIS COLLEGE THROUGH THE END OF THE FIRST THREE WEEKS OF YOUR FIRST SEMESTER/QUARTER.** (Respond to each item)

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
a. The very first time I came to this college I felt welcome	○	○	○	○	○
b. The instructors at this college want me to succeed	○	○	○	○	○
c. All the courses I needed to take during my first semester/quarter were available at times convenient for me	○	○	○	○	○
d. I was able to meet with an academic advisor at times convenient for me	○	○	○	○	○
e. An advisor helped me to select a course of study, program, or major	○	○	○	○	○
f. An advisor helped me to set academic goals and to create a plan for achieving them	○	○	○	○	○
g. An advisor helped me to identify the courses I needed to take during my first semester/quarter	○	○	○	○	○
h. A college staff member talked with me about my commitments outside of school (work, children, dependents, etc.) to help me figure out how many courses to take	○	○	○	○	○
i. The college provided me with adequate information about financial assistance (scholarships, grants, loans, etc.)	○	○	○	○	○
j. A college staff member helped me determine whether I qualified for financial assistance	○	○	○	○	○
k. All instructors had activities to introduce students to one another	○	○	○	○	○
l. All instructors clearly explained academic and student support services available at this college	○	○	○	○	○
m. All instructors clearly explained course grading policies	○	○	○	○	○
n. All instructors clearly explained course syllabi (syllabuses)	○	○	○	○	○
o. I knew how to get in touch with my instructors outside of class	○	○	○	○	○
p. At least one college staff member (other than an instructor) learned my name	○	○	○	○	○
q. At least one other student whom I didn't previously know learned my name	○	○	○	○	○
r. At least one instructor learned my name	○	○	○	○	○
s. I learned the name of at least one other student in most of my classes	○	○	○	○	○
t. I have the motivation to do what it takes to succeed in college	○	○	○	○	○
u. I am prepared academically to succeed in college	○	○	○	○	○

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19. During the FIRST THREE WEEKS OF YOUR FIRST SEMESTER/QUARTER ***at this college***, about how often did you do the following? (Respond to each item)

	Never	Once	Two or three times	Four or more times
a. Ask questions in class or contribute to class discussions	○	○	○	○
b. Prepare at least two drafts of a paper or assignment before turning it in	○	○	○	○
c. Turn in an assignment late	○	○	○	○
d. Not turn in an assignment	○	○	○	○
e. Participate in supplemental instruction (extra class sessions with an instructor, tutor, or experienced student)	○	○	○	○
f. Come to class without completing readings or assignments	○	○	○	○
g. Work with other students on a project or assignment during class	○	○	○	○
h. Work with classmates outside of class on class projects or assignments	○	○	○	○
i. Participate in a required study group outside of class	○	○	○	○
j. Participate in a student-initiated (not required) study group outside of class	○	○	○	○
k. Use an electronic tool (e-mail, text messaging, Facebook, MySpace, class Web site, etc.) to communicate with another student about coursework	○	○	○	○
l. Use an electronic tool (e-mail, text messaging, Facebook, MySpace, class Web site, etc.) to communicate with an instructor about coursework	○	○	○	○
m. Discuss an assignment or grade with an instructor	○	○	○	○
n. Ask for help from an instructor regarding questions or problems related to a class	○	○	○	○
o. Receive prompt written or oral feedback from instructors on your performance	○	○	○	○
p. Receive grades or points on assignments, quizzes, tests, or papers, etc.	○	○	○	○
q. Discuss ideas from your readings or classes with instructors outside of class	○	○	○	○
r. Discuss ideas from your readings or classes with others outside of class (students, family, co-workers, etc.)	○	○	○	○
s. Skip class	○	○	○	○

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20. **This section asks three questions about a variety of college services. Answer ALL THREE QUESTIONS for each service indicating (1) whether you knew about it, (2) how often you used it, and (3) how satisfied you were. To respond, please think about your experiences FROM THE TIME OF YOUR DECISION TO ATTEND THIS COLLEGE THROUGH THE END OF THE FIRST THREE WEEKS OF YOUR FIRST SEMESTER/QUARTER.**

	(1) Did you KNOW ABOUT it?		(2) How often did you USE it?				(3) How SATISFIED were you with it?			
	Yes	No	Never	Once	Two or three times	Four or more times	Very	Some-what	Not at all	N/A
a. Academic advising/planning	○	○	○	○	○	○	○	○	○	○
b. Career counseling	○	○	○	○	○	○	○	○	○	○
c. Job placement assistance	○	○	○	○	○	○	○	○	○	○
d. Face-to-face tutoring	○	○	○	○	○	○	○	○	○	○
e. Online tutoring	○	○	○	○	○	○	○	○	○	○
f. Writing, math, or other skill lab	○	○	○	○	○	○	○	○	○	○
g. Financial assistance advising	○	○	○	○	○	○	○	○	○	○
h. Computer lab	○	○	○	○	○	○	○	○	○	○
i. Student organizations	○	○	○	○	○	○	○	○	○	○
j. Transfer credit assistance	○	○	○	○	○	○	○	○	○	○
k. Services to students with disabilities	○	○	○	○	○	○	○	○	○	○

21. **This set of items asks you about your earliest experiences *at this college*. To respond, please think about your experiences FROM THE TIME OF YOUR DECISION TO ATTEND THIS COLLEGE THROUGH THE END OF THE FIRST THREE WEEKS OF YOUR FIRST SEMESTER/QUARTER. (Respond to each item)**

Within a class, or through another experience at this college:	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
a. I learned to improve my study skills (listening, note taking, highlighting readings, working with others, etc.)	○	○	○	○	○
b. I learned to understand my academic strengths and weaknesses	○	○	○	○	○
c. I learned skills and strategies to improve my test-taking ability	○	○	○	○	○

22. **Thinking about your experiences FROM THE TIME OF YOUR DECISION TO ATTEND THIS COLLEGE THROUGH THE END OF THE FIRST THREE WEEKS OF YOUR FIRST SEMESTER/QUARTER, what has been your MAIN source of academic advising (help with academic goal-setting, planning, course recommendations, graduation requirements, etc.)? (Mark only ONE)**

- ○ Instructors
- ○ College staff (not instructors)
- ○ Friends, family, or other students
- ○ Computerized degree advisor system
- ○ College Web site
- ○ Other college materials

23. **Was a specific person assigned to you so you could see him/her each time you needed information or assistance?**
○ Yes ○ No

24. **During the FIRST THREE WEEKS OF YOUR FIRST SEMESTER/QUARTER *at this college*, about how many hours did you spend in a typical 7-day week doing each of the following?**

	None	1-5	6-10	11-20	21-30	More than 30
a. Preparing for class (in a typical 7-day week)	○	○	○	○	○	○
b. Working for pay (in a typical 7-day week)	○	○	○	○	○	○

25. **When do you plan to take classes *at this college* again?**
○ I will accomplish my goal(s) during this semester/quarter and will not be returning
○ I have no current plans to return
○ Within the next 12 months
○ Uncertain

26. While in high school, did you	Yes	No	N/A
a. Take math every school year?	○	○	○
b. Take math during your senior year?	○	○	○

27. **Would you recommend this college to a friend or family member?**
○ Yes ○ No

28. **In what range was your overall high school grade average?**
○ A ○ A- to B+ ○ B ○ B- to C+ ○ C ○ C- or lower

29. **Your sex:**
○ Male ○ Female

30. **Mark your age group.**
○ Under 18 ○ 18 to 19 ○ 20 to 21 ○ 22 to 24 ○ 25 to 29 ○ 30 to 39 ○ 40 to 49 ○ 50 to 64 ○ 65+

	Yes	No
31. Are you married?	○	○
32. Do you have children who live with you and depend on you for their care?	○	○
33. Is English your native (first) language?	○	○
34. Are you an international student or nonresident alien?	○	○

35. **What is your racial/ethnic identification?** (Mark only ONE)
○ American Indian or Native American
○ Asian, Asian American, or Pacific Islander
○ Native Hawaiian
○ Black or African American, Non-Hispanic
○ White, Non-Hispanic
○ Hispanic, Latino, Spanish
○ Other

36. **What is the highest academic certificate or degree you have earned?** (Mark only ONE)
○ None ○ GED ○ High school diploma ○ Vocational/technical certificate ○ Associate degree ○ Bachelor's degree ○ Master's/Doctoral/Professional degree

37. **Please indicate whether your goal(s) for attending *this college* include the following:** (Respond to all three)

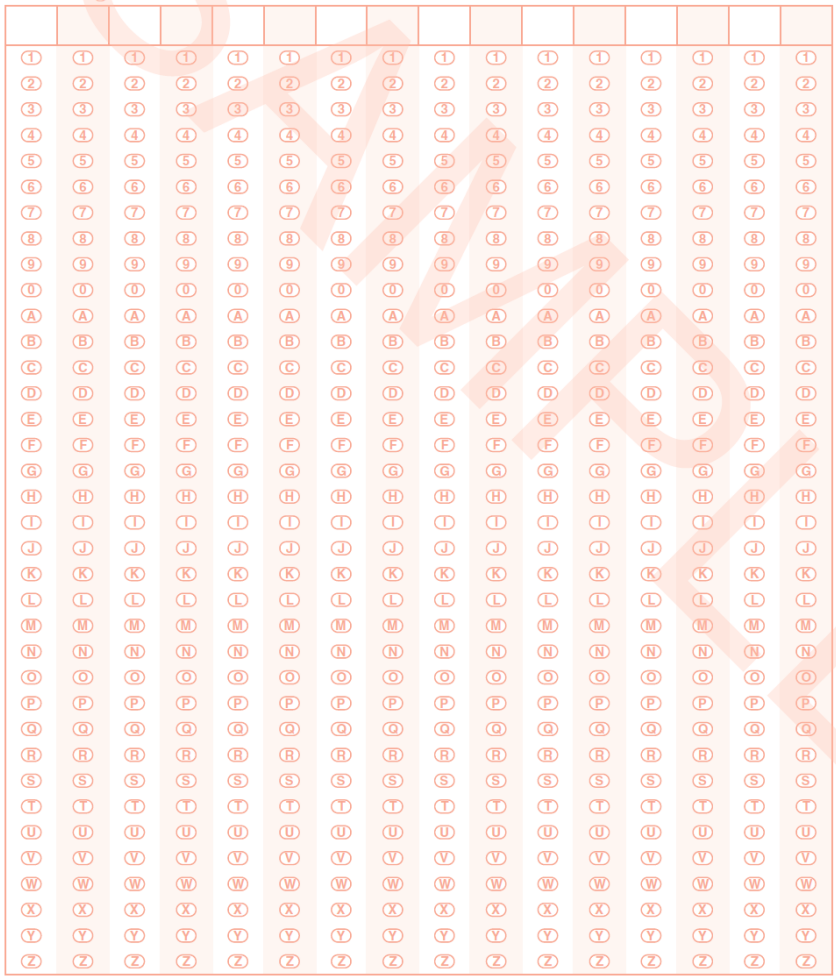
	Yes	No
a. To complete a certificate	○	○
b. To obtain an Associate degree	○	○
c. To transfer to a 4-year college or university	○	○

38. **Who in your family has attended at least some college?** (Mark all that apply)

- ○ Mother
- ○ Father
- ○ Brother/Sister
- ○ Child
- ○ Spouse/Partner
- ○ Legal Guardian
- ○ None of the above

39. **Please provide your student identification number by filling in the corresponding ovals. For example, in the first column, indicate the first number or letter in your student ID number, and so forth.** (OPTIONAL)

(Please begin here)



Additional Items
(Please respond to these items if requested)

1	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	13	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
2	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	14	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
3	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	15	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
4	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	16	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
5	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	17	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
6	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	18	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
7	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	19	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
8	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	20	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
9	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	21	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
10	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	22	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
11	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	23	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
12	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	24	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ

Your responses will remain confidential.
No individual responses will be reported.

Thank you for sharing your views.

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PLEASE DO NOT MARK IN THIS AREA

SERIAL #

APPENDIX B: 2014 SENSE COHORT:

Participating Community Colleges Listed in Descending Order by Year (2014, 2013, 2012)

2014 Administration (114 colleges)

Allegany College of Maryland (MD)
Anne Arundel Community College (MD)
Athens Technical College (GA)
Bay College (MI)
Berkshire Community College (MA)
Bevill State Community College (AL)
Bishop State Community College (AL)
Black Hawk College (IL)
Blue Ridge Community College (VA)
Bossier Parish Community College (LA)
Brazosport College (TX)
Broward College (FL)
Central Alabama Community College (AL)
Central Lakes College (MN)
Central Ohio Technical College (OH)
Chandler-Gilbert Community College (AZ)
Cleveland State Community College (TN)
Coastal Bend College (TX)
College of Southern Idaho (ID)
College of Southern Maryland (MD)
College of the Mainland (TX)
Community College of Beaver County (PA)
Compton College (CA)
Corning Community College (NY)
Craven Community College (NC)
Delaware Technical Community College - Owens Campus (DE)
Delaware Technical Community College - Stanton and Wilmington Campuses (DE)
Delaware Technical Community College - Terry Campus (DE)
Eastern Iowa Community Colleges (IA)
El Camino College (CA)
Ellsworth Community College (IA)
Essex County College (NJ)
Estrella Mountain Community College (AZ)
Florida Keys Community College (FL)
Florida SouthWestern State College (FL)
Florida State College at Jacksonville (FL)

Fort Scott Community College (KS)
Gaston College (NC)
GateWay Community College (AZ)
Germanna Community College (VA)
Glen Oaks Community College (MI)
Glendale Community College (AZ)
Gogebic Community College (MI)
Grand Rapids Community College (MI)
Grayson College (TX)
Great Falls College MSU (MT)
Greenville Technical College (SC)
Guttman Community College (NY)
Hawkeye Community College (IA)
Hennepin Technical College (MN)
Indian Hills Community College (IA)
Iowa Central Community College (IA)
Iowa Lakes Community College (IA)
Iowa Western Community College (IA)
Joliet Junior College (IL)
Kirkwood Community College (IA)
Laney College (CA)
Lansing Community College (MI)
Laramie County Community College (WY)
Laredo Community College (TX)
Luzerne County Community College (PA)
Marshalltown Community College (IA)
Martin Community College (NC)
Mesa Community College (AZ)
Metropolitan Community College (MO)
Moraine Park Technical College (WI)
Mount Wachusett Community College (MA)
Mountain Empire Community College (VA)
National Park College (AR)
Navarro College (TX)
New Mexico Junior College (NM)
New Mexico State University Alamogordo (NM)
North Iowa Area Community College (IA)
North Shore Community College (MA)
Northeast Iowa Community College (IA)
Northeast Lakeview College (TX)

Northeast Wisconsin Technical College (WI)
Northeastern Oklahoma A&M College (OK)
Northwest Iowa Community College (IA)
Northwest Vista College (TX)
Oakton Community College (IL)
Oregon Coast Community College (OR)
Paradise Valley Community College (AZ)
Paris Junior College (TX)
Pasadena City College (CA)
Pellissippi State Community College (TN)
Phoenix College (AZ)
Santa Fe College (FL)
Santa Fe Community College (NM)
Scottsdale Community College (AZ)
Shawnee Community College (IL)
South Florida State College (FL)
South Georgia State College (GA)
South Mountain Community College (AZ)
South Texas College (TX)
Southeastern Community College (IA)
Southside Virginia Community College (VA)
Southwestern Community College (IA)
Southwestern Community College (NC)
SOWELA Technical Community College (LA)
Surry Community College (NC)
Tacoma Community College (WA)
Tallahassee Community College (FL)
Texarkana College (TX)
Triton College (IL)
Tyler Junior College (TX)
University of Cincinnati Blue Ash College (OH)
University of the District of Columbia Community College (DC)
Volunteer State Community College (TN)
West Shore Community College (MI)
Westchester Community College (NY)
Western Iowa Tech Community College (IA)
Wharton County Junior College (TX)
Williamsburg Technical College (SC)

2013 Administration (85 colleges)

Aiken Technical College (SC)
Berkeley City College (CA)
Bossier Parish Community College (LA)
Brookdale Community College (NJ)
Bucks County Community College (PA)
Caldwell Community College and Technical Institute (NC)
Calhoun Community College (AL)
Casper College (WY)
Central Alabama Community College (AL)
Cleveland State Community College (TN)
Coastal Bend College (TX)
Cochise College (AZ)
College of Southern Idaho (ID)
Columbus State Community College (OH)
Community College of Beaver County (PA)
Davidson County Community College (NC)
Dyersburg State Community College (TN)
East Central Community College (MS)
Eastern Gateway Community College (OH)
Eastern Iowa Community Colleges (IA)
Eastern Wyoming College (WY)
El Centro College (TX)
Ellsworth Community College (IA)
Florida SouthWestern State College (FL)
Forsyth Technical Community College (NC)
Guttman Community College (NY)
Hartnell College (CA)
Helena College University of Montana (MT)
Highland Community College (IL)
Kilgore College (TX)
Lake Washington Institute of Technology (WA)
Lee College (TX)
Lone Star College - CyFair (TX)
Lone Star College - Kingwood (TX)
Lone Star College - Montgomery (TX)
Lone Star College - North Harris (TX)
Lone Star College - Tomball (TX)
Lone Star College - University Park (TX)
Marshalltown Community College (IA)

Massasoit Community College (MA)
Mission College (CA)
Montgomery County Community College (PA)
Moorpark College (CA)
Muskegon Community College (MI)
Northampton Community College (PA)
Northeast Lakeview College (TX)
Northland Community and Technical College (MN)
Northwest Vista College (TX)
Nova Scotia Community College (NS)
Palo Alto College (TX)
Pellissippi State Community College (TN)
Phillips Community College of the University of Arkansas (AR)
Pierce College District (WA)
Pima Community College (AZ)
Pine Technical and Community College (MN)
Ranger College (TX)
Redlands Community College (OK)
Riverland Community College (MN)
Rowan College at Burlington County (NJ)
Rowan College at Gloucester County (NJ)
Saint Paul College (MN)
San Antonio College (TX)
San Jacinto College - Central Campus (TX)
San Jacinto College - North Campus (TX)
San Jacinto College - South Campus (TX)
South Seattle College (WA)
Southcentral Kentucky Community and Technical College (KY)
Southwestern Indian Polytechnic Institute (NM)
St. Louis Community College (MO)
St. Petersburg College (FL)
State College of Florida, Manatee-Sarasota (FL)
Tarrant County College District (TX)
Treasure Valley Community College (OR)
Ventura College (CA)
Vernon College (TX)
Victoria College (TX)
Volunteer State Community College (TN)
Wake Technical Community College (NC)
Wayne Community College (NC)

Western Wyoming Community College (WY)
Wharton County Junior College (TX)
Williamsburg Technical College (SC)
Williston State College (ND)
Yuba Community College District (CA)
Zane State College (OH)

2012 Administration (151 colleges)
Aims Community College (CO)
Allegany College of Maryland (MD)
Amarillo College (TX)
Anne Arundel Community College (MD)
Asnuntuck Community College (CT)
Austin Community College (TX)
Bay College (MI)
Bevill State Community College (AL)
Black Hawk College (IL)
Blue Mountain Community College (OR)
Blue Ridge Community College (NC)
Blue Ridge Community College (VA)
Bossier Parish Community College (LA)
Brazosport College (TX)
Calhoun Community College (AL)
Capital Community College (CT)
Casper College (WY)
Central Lakes College (MN)
Central Oregon Community College (OR)
Central Piedmont Community College (NC)
Chemeketa Community College (OR)
Cisco College (TX)
Clackamas Community College (OR)
Cleveland State Community College (TN)
College of the Mainland (TX)
College of the Ouachitas (AR)
College of the Siskiyous (CA)
Colorado Mountain College (CO)
Columbia Gorge Community College (OR)
Community College of Beaver County (PA)
County College of Morris (NJ)
Craven Community College (NC)
Cuesta College (CA)

Cuyahoga Community College - Eastern (OH)
Cuyahoga Community College - Metropolitan (OH)
Cuyahoga Community College - Western Campus (OH)
Cuyahoga Community College - WestShore (OH)
Darton State College (GA)
Durham Technical Community College (NC)
Dyersburg State Community College (TN)
East Central Community College (MS)
Eastern Iowa Community Colleges (IA)
Eastern New Mexico University - Roswell (NM)
Eastfield College (TX)
Ellsworth Community College (IA)
Florida SouthWestern State College (FL)
Florida State College at Jacksonville (FL)
Fond du Lac Tribal and Community College (MN)
Garden City Community College (KS)
Gateway Community College (CT)
Glen Oaks Community College (MI)
Goodwin College (CT)
Grand Rapids Community College (MI)
Grayson College (TX)
Great Falls College MSU (MT)
Greenville Technical College (SC)
Guilford Technical Community College (NC)
Harrisburg Area Community College - Gettysburg Campus (PA)
Harrisburg Area Community College - Harrisburg Campus (PA)
Harrisburg Area Community College - Lancaster Campus (PA)
Harrisburg Area Community College - Lebanon Campus (PA)
Harrisburg Area Community College - York Campus (PA)
Hawkeye Community College (IA)
Hennepin Technical College (MN)
Housatonic Community College (CT)
Illinois Central College (IL)
Indian Hills Community College (IA)
Iowa Central Community College (IA)
Iowa Lakes Community College (IA)
Iowa Western Community College (IA)
Jackson College (MI)
Jefferson Community and Technical College (KY)
John Tyler Community College (VA)

Johnson County Community College (KS)
Kauai Community College (HI)
Kirkwood Community College (IA)
Klamath Community College (OR)
Lane Community College (OR)
Lansing Community College (MI)
Laramie County Community College (WY)
Linn-Benton Community College (OR)
Los Angeles Southwest College (CA)
Los Angeles Trade-Technical College (CA)
Los Medanos College (CA)
Manchester Community College (CT)
Marshalltown Community College (IA)
McLennan Community College (TX)
Mercer County Community College (NJ)
Middlesex Community College (CT)
Midland College (TX)
Midlands Technical College (SC)
Mississippi Gulf Coast Community College (MS)
Moraine Park Technical College (WI)
Mountain View College (TX)
National Park College (AR)
Naugatuck Valley Community College (CT)
New Mexico State University Alamogordo (NM)
North Central Texas College (TX)
North Iowa Area Community College (IA)
Northeast Iowa Community College (IA)
Northeast Lakeview College (TX)
Northeast State Community College (TN)
Northeast Texas Community College (TX)
Northeast Wisconsin Technical College (WI)
Northern Virginia Community College (VA)
Northwest Iowa Community College (IA)
Northwest Vista College (TX)
Northwestern Connecticut Community College (CT)
Norwalk Community College (CT)
Oregon Coast Community College (OR)
Paris Junior College (TX)
Prince George's Community College (MD)
Quinebaug Valley Community College (CT)

Rappahannock Community College (VA)
Redlands Community College (OK)
Renton Technical College (WA)
Rio Grande Community College (OH)
Rochester Community and Technical College (MN)
Rogue Community College (OR)
Roxbury Community College (MA)
Salem Community College (NJ)
Santa Fe College (FL)
Schoolcraft College (MI)
Sinclair Community College (OH)
Snead State Community College (AL)
South Texas College (TX)
Southeastern Community College (IA)
Southwest Tennessee Community College (TN)
Southwestern Community College (IA)
Southwestern Community College (NC)
Southwestern Oregon Community College (OR)
SOWELA Technical Community College (LA)
St. Petersburg College (FL)
State College of Florida, Manatee-Sarasota (FL)
Tallahassee Community College (FL)
Tarrant County College District (TX)
Terra State Community College (OH)
Three Rivers Community College (CT)
Tillamook Bay Community College (OR)
Tunxis Community College (CT)
Tyler Junior College (TX)
Umpqua Community College (OR)
University of Cincinnati Blue Ash College (OH)
University of the District of Columbia Community College (DC)
Vancouver Community College (BC)
Volunteer State Community College (TN)
Wake Technical Community College (NC)
Washington State Community College (OH)
Western Iowa Tech Community College (IA)
Wharton County Junior College (TX)
Williamsburg Technical College (SC)

APPENDIX C: DATA USER AGREEMENT FOR SENSE

CCCSE
The Center for Community College Student Engagement

SENSE
Survey of Entering Student Engagement
a CCCSE initiative

Data Use Agreement
Survey of Entering Student Engagement

The Survey of Entering Student Engagement (*SENSE*) instrument is copyrighted. Data collected through *SENSE* administration and maintained as part of the Center for Community College Student Engagement's (CCCSE) national database is the property of *CCCSE*. These data will be made available only for use in research projects approved by *CCCSE* in advance and only upon favorable review of the requestor's submission of the following information:

1. Statement of the objective of the applicant's survey or study, along with clearly stated research questions;

   The purpose of this study is to determine which institutional support services correlate to community college students' positive self-assessment of their college readiness. A three-part SENSE question benchmarked as "Effective Track to College Readiness" will be used as the dependent variable, and selected SENSE survey questions benchmarked as "Early Connections," "Engaged Learning," "Academic and Social Support Network" will be used as independent variables for this study.

   Research Questions

   - To what extent do student-to-staff and student-to-faculty experiences correlate to community college students' self-assessment of their improvement of study skills, understanding or academic strengths and weaknesses, and improvement of test-taking strategies and skills?
   - To what extent do orientation requirements correlate to community college students' self-assessment of their improvement of study skills, understanding of academic strengths and weaknesses, and improvement of test-taking strategies and skills?
   - To what extent do college success or student success courses correlate to community college students' self-assessment of their improvement of study skills, understanding of academic strengths and weaknesses, and improvement of test-taking strategies and skills?
   - To what extent do tutoring services correlate to community college students' self-assessment of their improvement of study skills, understanding of academic strengths and weaknesses, and improvement of test-taking strategies and skills?

2. Expected completion date of the research;

   Research completion date goal is August 2018. If entire dissertation committee is not available to meet during summer months, research completion goal will be December 2018.

CCCSE The Center for Community College Student Engagement

SENSE Survey of Entering Student Engagement a CCCSE initiative

3. Name, title, organization and complete contact information for the principal investigator; if the requested use is for a dissertation study, please provide also the same information for the dissertation committee chairperson.

   I am requesting use of data for my dissertation study. I am enrolled in Florida Southern College's Doctor of Educational Leadership program (Ed.D.).

   Principal Investigator: Stacy Durden Sharp
   Personal Address: 3082 Oaks Bend, Bowling Green, Florida, 33834
   Phone: 863.781.1965
   Work Address: South Florida State College, 600 W. College Drive, Avon Park, Florida, 33825
   Phone: 863.784.7066
   Email: ssharp2@mocs.flsouthern.edu

   Dissertation Committee Chairperson: Dr. Steve Petrie
   Address: Florida Southern College, 111 Lake Hollingsworth Dr., Lakeland, Florida, 33801
   Phone: 863.680.5023
   Email: spetrie@flsouthern.edu

The data provided under this agreement consists of 26,203 observations (a 25% random sample) from the full 2014 three-year *SENSE* cohort data set. All items from the main survey except for the student identification number (#39) are included. The data set will also include variables with randomized values to distinguish respondent institutions and respondent state; these values were created at random so that the actual institution and state cannot be identified. A codebook will also be provided with the data set.

Agreement:
Applicant must agree to the following conditions:

1. Applicant will provide to *CCCSE* both electronic and hard copies of the proposal for subject research (e.g., the dissertation proposal for doctoral studies), including the overview of proposed research, research questions, literature review, and description of methodology. These materials shall be provided in a timeframe that allows *CCCSE* staff at least 3 weeks for review and comment prior to finalization of the research proposal.
2. Applicant will provide to *CCCSE* an electronic copy of the results of data analysis; electronic and hard copies of the subject report or study; and the appropriate citation for the work. The signature below also indicates permission to cite the report or study, with appropriate credit, on the *CCCSE* Web site.
3. When data on *SENSE's* items are reported, applicant will include the following citation: "Data used with permission from the *Center for Community College Student Engagement, The Community College Survey of Student Engagement [date of survey version -- e.g., 2007],* The University of Texas at Austin."
4. Permission is valid for one-time use only but may be renewed with written permission from *CCCSE*.
5. Applicant agrees to comply with provisions set forth in *CCCSE's* policy statement on Responsible Uses of Survey Data (see link at bottom of page at www.cccse.org).

Stacy Durden Sharp
Please Print Principal Investigator's Name

Principal Investigator's Signature

4/20/2018
Date

Please return this information to the address listed below or email to data@cccse.org.

The University of Texas at Austin
Center for Community College Student Engagement
3316 Grandview Street, Austin, TX 78705

APPRENDIX D: PERMISSION TO USE SENSE DATA SET

From: Mike Bohlig <bohlig@cccse.org>
Sent: Friday, May 11, 2018 3:00 PM
To: Sharp, Stacy D
Subject: RE: Request for Use of Survey Data for Dissertation

Hi Stacy,

I have reviewed your data use agreement and I approve your request. Please keep this message as proof that you have permission to use this data set.

You can download the data packet from here. The zip file includes the data file (CSV format), a document explaining how the benchmarks are created and when to use weights, and a codebook.

Please let me know if you have any questions or difficulties downloading the SENSE data set.

Good luck with your dissertation,
Mike.

E. Michael Bohlig, Ph.D. | Assistant Director of Research
Center for Community College Student Engagement
Program in Higher Education Leadership
Department of Educational Leadership and Policy
College of Education
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