LOGISTICS REGRESSION TO DETERMINE THE INFLUENCE OF BEAN AND METZNER'S PERSISTENCE FACTORS AS DEFINED BY THE COMMUNITY COLLEGE SURVEY OF STUDENT ENGAGEMENT (CCSSE) ON NONTRADITIONAL STUDENTS

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The undersigned, appointed by the dean of the Graduate School, have examined the dissertation entitled

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Dedicated to four wonderful women: Shirley, Judith, Norma and Alverna.

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ABSTRACT

The purpose of this study was to explore Bean and Metzner's (1985) persistence factors, defined by items on the Community College Survey of Student Engagement (CCSSE), to determine the impact on nontraditional student persistence. This quantitative study measured nontraditional student persistence at a community college in the Midwest using archival data.

Independent variables included select CCSSE items that related to variables identified by Bean and Metzner (1985) in their Model of Nontraditional Undergraduate Student Attrition. The dependent variable was persistence. Data were analyzed using a validity panel, descriptive statistic analysis, chi square tests, and logistic regression.

Chi square tests revealed four CCSSE items to be statistically significant, while logistic regression found no statistical significance. Results indicate that Bean and Metzner's (1985) factors did not predict persistence. In addition, CCSSE was not found to discriminate between persistence and non-persistence for nontraditional students. The study concludes that there is no profile of the nontraditional student.

CHAPTER 1

INTRODUCTION TO THE STUDY

The purpose of this study was to review persistence factors identified by Bean and Metzner (1985), and defined by items on the Community College Survey of Student Engagement (CCSSE), that may impact a nontraditional student's persistence to the second year at a community college. Understanding the influence Bean and Metzner's persistence factors have on a student's likelihood to persist can contribute to the research on nontraditional student persistence, as well as the application of the CCSSE to a specific population. This study will also contribute to the possible development of programs and intervention techniques aimed at encouraging the retention of nontraditional students. This study compared selected items on the CCSSE to determine if responses can predict a student's likelihood to persist. Further, the selected items were organized into Bean and Metzner's (1985) persistence factors, which include: Academic Outcome, Background/Defining Variables, Intent to Leave, and Environmental Variables. The clusters have been examined to determine if there is an ability to predict persistence of nontraditional students based on answers provided. Data from the CCSE selected items from a three year time span were evaluated.

In the Nontraditional Undergraduate Student Attrition Model developed by Bean and Metzner (1985), four sets of persistence factors that influence a nontraditional student's decision to persist were identified. Bean and Metzner's (1985) persistence factors included: (a) academic outcome, as measured by grade point average; (b) intent to leave, which is influenced primarily by psychological outcomes and academic variables; (c) background and defining variables, primarily high school performance and

educational goals; and (d) environmental variables. All four variables were explored through the use of the CCSSE.

This study was based upon Bean and Metzner's (1985) assertion that certain persistence factors have stronger influences over a nontraditional student's likelihood to persist than other variables. Bean and Metzner (1985) suggested that the identified persistence factors related to influences and experiences exerted on the individual, as well as their background and behavior. The CCSSE was designed to measure institutional practices, student behavior and experiences that impact student outcomes (McClenney & Marti, 2006, CCSSE, 2010). As a result, the CCSSE was selected as the data source and various CCSSE items were identified to define Bean and Metzner's persistence factors in the nontraditional student population.

This chapter will provide background information, including a conceptual underpinning, address the purpose of the study, provide a statement of the problem, introduce research items, outline the research hypothesis and limitations of the study, and define key terms used in the study.

Background

It is commonly assumed that retention of students plays a critical role in how colleges are judged to be successful (Noel-Levitz, 2008; Seidman, 2005; Tinto, 1991, 2001). Public scrutiny and political demands are applying increasing pressure on higher education to increase graduation rates (Heller, 2001). However, the transient population of community college students, combined with open admissions policies, makes retention a more difficult goal to attain (Richardson & Bender, 1987). In addition, the demographics that compose the majority of community college students are attributes

associated with attrition (Anderson, 1981; Astin 1975; Stahl, 1986). Many of the students entering college for the first time, or returning to college, are older adult students (Brazziel, 1989, NCES, 2009). These students enter college with very different goals, expectations, and experiences than the traditional-aged college student (Lerner & King, 1992). Finally, as funding becomes more limited, institutions of higher education are mindful of the cost difference in recruiting a student versus retaining the same student (Noel-Levitz, 2005; Raisman, 2009). Identifying factors that can increase retention becomes even more critical for community colleges in order to assist staff develop techniques, services and programs to help students meet their academic goals.

Missouri Post-Secondary Student Numbers

The percentage of Missouri students earning a post-secondary degree is lagging behind the rest of the nation. In 2007, Missouri ranked 35th in the nation for percentage of the population with an associate's degree or above (Imperatives for Change Baseline Report, 2009). Missouri also shows a decline in persistence rates (fall-to-fall enrollment) at two-year institutions. In 2007, the completion rate at Missouri two-year institutions was at 32%, while four-year institutions experienced a 56% completion rate (Imperatives for Change Baseline Report, 2009). In the Imperatives for Change Baseline Report (2009), Missouri ranked 27th in the nation for total population over the age of 24 that are enrolled in post-secondary institutions.

Institution Under Study Profile

In the fall of 2009, the institution under study reported 30% of its student population was over the age of 24 (NCES, 2010). The same institution reported a 63% persistence rate from fall 2008 to fall 2009 for all first-time, full-time degree seeking

students and a 39% completion rate (NCES, 2010). Though the completion rate is higher than the state average for two-year institutions, there is still room to increase the completion rate. The institution under study indicates a desire to increase its persistence rate and improve the percentage of students that complete a degree (Institution strategic report, 2010).

In an attempt to understand why students, and, in particular, nontraditional students, persist at lower rates nationally, a conceptual underpinning of nontraditional student persistence is offered.

Conceptual Underpinning

Theories and models of persistence focus on different attributes of both students and the surrounding environment. Many of these theories and models have focused on the traditional age student and the need for social interaction and engagement in campus life. However, students are entering college at more widely varying stages of their lives, and as a result, traditional concepts and notions of persistence need to be examined in the context of changing campus populations (Kerka, 1995). In contrast to traditional notions of an a priori need for social interaction, nontraditional students interact and establish engagement in their academic endeavors in alternative ways.

Nontraditional students experience the college campus in different ways than their traditional aged counterparts and what engage them on campus and encourage their persistence varies. Although nontraditional students spend less time on campus and tend to have limited or no involvement in campus activities, they report gains in academic and intellectual items equal to or greater than traditional age students (Graham & Donaldson, 1996, 1999). However, nontraditional students tend to have higher rates of attrition as a

group. In particular, attrition rates among nontraditional students at two-year institutions are between 60% - 70% (Lombard, 1992; Quigley, 1995). In contrast, a study done by the Institute of Education Sciences revealed attrition rates ranging from approximately 14% to 23% for traditional aged students at a community college (2002). It is critical to understand the fundamental ways in which nontraditional students experience the institution in order for faculty and staff to develop environments that encourage retention and assist students in meeting their academic goals. Through Bean and Metzner's (1985) meta-analysis, they have offered a lens that combines several factors through which to view nontraditional student persistence.

Bean and Metzner's theories (1985) differ from traditional retention models in that less emphasis is placed on assimilation into the campus environment. In contrast to traditional notions of retention that focus on social interaction as a primary factor in retaining a student, Bean and Metzner (1985) suggested that other factors could compensate for lack of social integration for the nontraditional student. In 1985, Bean and Metzner developed the Nontraditional Undergraduate Student Attrition Model built from a meta-analysis of theories. Bean and Metzner's (1985) model focused on academic and environmental variables that influence a student's decision to persist. Bean and Metzner (1985) suggested that student attrition, particularly the attrition of nontraditional students, is related to the following variables: (a) academic outcome, (b) intent to leave, (c) background/defining variables, and (d) environmental variables. Bean and Metzner also suggested that past behavior could serve as a predictor of future behavior, and that attitudes can influence intentions, and thus guide behavior (Ajzen, 1991; Armitage & Conner, 2001; Bean & Metzner, 1985). Through the examination of background

variables, intent, and the surrounding environment, researchers can view factors that influence attrition and predict the likelihood of persistence.

Statement of the Problem

There is a lack of research on the correlation of persistence factors, as identified by Bean and Metzner (1985), to items on the Community College Survey of Student Engagement (CCSSE). In addition, there is a lack of recent information reviewing nontraditional student's likelihood to persist to the second year in a community college as measured by Bean and Metzner's (1985) items on the CCSSE.

Purpose of the Study

The purpose of the study was to identify and explore items on the CCSSE that predict a nontraditional student's likelihood to persist. The persistence factors have been identified through Bean and Metzner's (1985) Nontraditional Undergraduate Student Attrition Model as variables that impact a nontraditional student's persistence to the second year. Items on the CCSSE have been clustered into four categories corresponding to identified persistence factors by Bean and Metzner (1985).

The researcher completed a preliminary identification of 40 CCSSE items that were determined to define Bean and Metzner (1985) persistence factors. A validity panel of faculty and staff at various community colleges who have worked closely with nontraditional students and assessment instruments were asked to verify that the selected items on the CCSSE correspond to the Bean and Metzner's (1985) persistence factors that were identified by the researcher.

The CCSSE was administered to randomly selected classes at the institution. Classes were chosen by CCSSE researchers. For the purposes of this research, only

nontraditional students were included in research. Data used were archival and the design was non-experimental with no treatment being applied.

The CCSSE works in collaboration with the National Survey of Student Engagement (NSSE) and is designed to measure institutional practices and student behavior that correlate to student engagement. The CCSSE can be utilized as a benchmarking instrument to establish norms, a diagnostic tool, and a monitoring device to track institutional effectiveness (CCSSE, 2010). It has been administered at hundreds of community colleges annually since its inception in 2001 (CCSSE, 2010). Selected CCSSE items were examined to address the following research questions:

Research Questions

Four primary research questions will be posed in this study.

1. What CCSSE items best define Bean and Metzner persistence factors?
2. What are the overall descriptive statistics for the 40 CCSSE questions under study?
3. Is there a relationship in behavior of nontraditional students, as defined by 40 questions on the CCSSE, and the dependent variable of persistence?

   H_o3 – There is no relationship between behavior in nontraditional students that persist into the second year and those that do not. Alpha level of 0.10
4. Can regression models of CCSSE independent variables be constructed to predict persistence of nontraditional students within factors under study?

   H_o4 – There are no significant models among and between CCSSE independent variables that best predicts nontraditional student persistence as measured by CCSSE. Alpha level of 0.10

Limitations, Delimitations, and Design Controls

There are several limitations and delimitations in this study.

1. There is a lack of generalizability to other institutions because the population surveyed will be from one institution.
2. The time frame of the study is limited to the three years in which the CCSSE was administered.
3. The study explores nontraditional student persistence only and does not review the persistence rate of all students.
4. The study explores those students attending one community college only.
5. Bean and Metzner (2005) identified four persistence factors that influence nontraditional student persistence, including: (a) academic performance; (b) intent to leave; (c) background and defining variables; and (d) environmental variables with constructs included in each of these variables. Some constructs have been eliminated due to lack of corresponding CCSSE questions.
6. The research definition of persistence and attrition does not account for stopouts.
7. The answers to CCSSE questions are self-reported.

Definition of Key Terms

The following definitions were utilized for the purposes of this study. When applicable, relevant questions on the CCSSE have been provided.

Academic Outcome. Defined by Bean and Metzner (1985) as college academic performance, as measured by GPA. Related CCSSE question: Overall college grade point average (Q. 21)

Academic Variable. Defined by Bean and Metzner (1985) in their Nontraditional Undergraduate Student Attrition model as: study skills and habits, academic advising, absenteeism, major certainty, and course availability. Major certainty and course availability were excluded from this definition, as there are no related CCSSE items. Related CCSSE questions: Academic advising (Q13/1a, Q13/2a), time spent studying (Q6a, Q6c,Q4c,Q4e, Q4g, Q10a), and absenteeism (Q4u).

Attrition. Bean and Metzner (1985) noted in their model that attrition occurs when any student who is enrolled in one semester, but does not enroll in the next semester and does not complete his or her formally declared program of study. Bean and Metzner (1985) also caution that because nontraditional students drop out, stop out, or transfer, researchers should choose an operational definition appropriate to their study. Because the CCSSE is administered in the spring and summer enrollment decreases significantly in the institution under study, for the purposes of this study, attrition will be defined as not returning in the summer and/or fall semesters following completion of the spring CCSSE. Non-persistent will be defined the same way.

Background Variable. Defined by Bean and Metzner (1985) in their Nontraditional Undergraduate Student Attrition model as: educational goals, high school performance, ethnicity, and gender. This study will include educational goals and gender. Ethnicity has been excluded due to lack of diverse participants present in the data. High school performance has been excluded due to lack of corresponding CCSSE questions. Related CCSSE questions: Gender (Q 30), Educational goals (Q. 17).

Community College. Two-year colleges in the United States providing certificates, and associate's degrees.

Community College Survey of Student Engagement/CCSSE. "An assessment tool that provides information on student engagement…" (CCSSE, 2010).

Completion. "Students who earned an associate degree, tracked from the point at which they enroll for the first credit leading to a degree (McClenney & Marti, 2006). For the purposes of this study, those students seeking a one-year certificate will also be included as completers.

Defining variable. Defined by Bean and Metzner (1985) in their Nontraditional Undergraduate Student Attrition model as: age, enrollment status, and residence. For the purposes of this study, it will be defined as age. Residence is not included as a question on the CCSSE; however, there are no residential students above the age of 24, which is the study's focus. Related CCSSE question: Age (Q 29)

Environmental Variable. Defined by Bean and Metzner (1985) in their Nontraditional Undergraduate Student Attrition Model as, "a perceived (or real) lack of finances, working for long hours, lacking encouragement, family responsibilities, and a perceived opportunity to transfer…" (p. 502). Related CCSSE questions: Ability to pay tuition (Q9f, Q14d), hours of employment (Q10b, Q14a), outside encouragement (Q15, Q16), family responsibilities (Q10d, Q14, Q28, Q31,), and ability to transfer credit (Q13/1j, Q13/2j, Q14e).

First-time Attendee. A college student who is taking college credit for the first time, with the exception of dual credit.

Intent to Leave. Bean and Metzner (1985) indicated that "intent to leave indicates students' intention of leaving their present institution before graduating" (p. 528). Their

Nontraditional Undergraduate Student Attrition Model indicates that intent to leave includes psychological outcomes and academic variables (Bean & Metzner, 1985).

Non-persistent. See Attrition.

Nontraditional student. Bean and Metzner noted that "A nontraditional student is older than 24, or does not live in a campus residence, or is a part-time student, or some combination of these three factors…" (1985, p. 489). For the purposes of this study, nontraditional is defined as those students older than 24.

Persistence. Returning to enroll in at least 1 credit hour at the same institution of higher education in the summer or fall semester following completion of the CCSSE.

Psychological Outcome. Defined by Bean and Metzner (1985) as utility, satisfaction, goal commitment, and stress in their Nontraditional Undergraduate Student Attrition Model. Related CCSSE questions: Satisfaction with educational experience (Q27), commitment to goal completion (Q4, Q20), stress of attending (Q9b,Q9d,Q9e), and utility/practicality of getting a degree (Q12b, Q12h, Q12i, Q12j, Q12k, Q12l, Q12n, Q12o).

Retention. Generally defined as the percentage of students who graduate from the institution at which they started as freshman (Lenning, Beal, & Sauer, 1980).

Summary

Understanding the factors that influence a nontraditional community college student's likelihood to persist is critical for colleges and universities in decision making, program planning and intervention techniques. By understanding the factors that influence a nontraditional student's likelihood to persist, researchers can predict the likelihood of persistence of incoming nontraditional students and in turn, staff can design

programs, services and intervention techniques that can impact persistence, and by extension, their ability to complete a college degree. The Bean and Metzner Nontraditional Undergraduate Student Attrition Model (1985) can serve as a lens through which institutions can understand factors that influence nontraditional student persistence. The CCSSE can, in turn, be utilized to predict nontraditional student persistence based on the answers to questions that define the persistence factors. The remainder of this dissertation will consist of a review of cogent literature in Chapter Two, a discussion of methods in Chapter Three, presentation of analysis and data in Chapter Four, and finally findings, conclusions and recommendations in Chapter Five.

CHAPTER 2

REVIEW OF RELATED LITERATURE

This chapter will begin with a review of relevant theories, models and information related to student retention and persistence to understand factors that influence retention and persistence. The chapter will then explore the emergence of nontraditional students on campus in order to understand the nontraditional students' unique attributes, motivations and influences on the campus. Diverse definitions of what constitutes a nontraditional student exist and various definitions will be explored. The chapter will also explore the Community College Survey of Student Engagement (CCSSE) instrument, including a brief history of the instrument and what the CCSSE measures. The chapter will conclude with a review of research and scholarship related to adult student persistence factors to further explore the unique demographic.

Models of Persistence and Retention

Factors that influence student persistence and retention to graduation have been studied for many years. One of the first major retention studies was conducted by the U.S. Department of Education in 1931 (McNeeley, 1937). In those early years, theories surrounding retention were viewed from a purely psychological perspective, examining an individual's attributes, skills and motivations (Tinto, 2005). In the 1970's, a shift occurred and researchers began to examine the role the environment played on a student's matriculation through college (Tinto, 2005). Theorists such as Astin (1986), Pascarella and Terenzini (1991), and Tinto (1975), offered research that examined student engagement with and among the campus community. A focus on student

interaction and involvement became the general focus of college and universities in order to promote transition, retention and completion.

Astin (1986), Pascarella and Terenzini (1991), and Tinto (1975), have noted the relationship between a student's characteristics, skills, and goals and the college environment as a factor that influences student success and retention. In 1991, Pascarella and Terenzini synthesized over 2,500 studies regarding the impact college had on students. Through their research, they discovered that a student's personal experiences and the college culture play a significant role in a student's learning and development. Their research, along with others, has contributed to the growth in retention effort programs aimed at integrating students into the fabric of the institution. Data that support increasing student retention has additional value beyond altruistic goals, as competition for scarce resources, shrinking state appropriations, and increased demand for public accountability have become more salient in recent years.

In his Student Integration Model (1975), Tinto indicated that social and academic integration resulted in higher levels of student commitment and persistence. Tinto suggested that as a result of pre-entry attributes, students form goals and commitments that interact with their experiences at the institution. The extents to which these goals and experiences become integrated determine the likelihood of retention of that student (Tinto, 1987, 1993). Tinto noted that "the practical route to successful retention lies in those programs that ensure from the very outset of contact with the institution, that students are integrated into the social and academic communities of the college and acquire the skills and knowledge needed to become successful learners in those communities" (1990, p. 44). Tinto concluded that academic and social integration are key

to retaining students (1970, 1990, 1993). Tinto also observed that students move through rites of passage as they matriculate, and this progression culminates in an incorporation process where students take on new patterns of interaction with members of the new group, which is the college campus and its members (1988). Tinto's model (1975) asserts that integration and conditions that foster engagement and support are crucial to retention.

Tinto defined reasons students leave the institution in his model of institutional departure (1993). Three major sources of departure include: academic difficulties, the inability of individuals to resolve their educational and occupational goals, and their failure to become or remain involved in the life of the institution (Tinto, 1993). Ultimately, Tinto asserts that student integration in all activities of the institution, both formal and informal as well as academic and social, influences a student's retention (1993). As Tinto revisited his theories, he suggested developing group-specific models for students, though academic and social integration remain the focus (1993). Tinto's model continues to be the foundation of many retention efforts across college campuses.

In the 1970's, Astin conducted longitudinal research specific to retention. In the 1980's and 1990's, Astin's research further developed with his theory of student involvement. Central to the theory is that a student's commitment to his education affects his intellectual and personal development, and subsequently his academic success (Astin, 1993). Commitment is translated as the student's physical and psychological engagement to the academic experience, as well as the quantity and quality of the student's actions with his peers, faculty and staff (Astin 1993, 1996). Accordingly, retention can be influenced by enhancing student interaction with campus personnel. Astin's theory of

student involvement indicates that when students are involved in the academic and social aspects of college, they are more likely to persist and be successful (1984, 1987). To promote high levels of engagement and academic success, Astin argued that institutions will benefit from the implementation of programs and services that foster engagement both in and outside the classroom (1985). Astin's theory continues to play an important part in the construct of campus environments that are student-centered and efforts to create intentional interactions between students and their peers and faculty.

A variety of persistence and retention models and theories exist. This study contributes to current research by applying a particular theory, Bean and Metzner's Nontraditional Undergraduate Student Attrition Model (1985), to the CCSSE instrument. Through the application of Bean and Metzner's (1985) model to the instrument, researchers may be able to identify specific sets of factors that impact persistence and, in turn, institutions can employ techniques and programs that could have a positive influence on that behavior in order to encourage persistence in a specific student population.

The Emerging Focus on Nontraditional Students

As student populations became more varied and complex, traditional notions of retention and factors that influence retention expanded. A report done by the National Center for Education Statistics (NCES) (2002) indicated that the college population was 72 percent larger in 1999 than in 1970, with fall enrollment increasing from 7.4 to 12.7 million students (NCES, 2002). The NCES (2002) indicates that in that same time span, part-time students have increased from 28% to 39% and 2-year college attendance has increased from 31% to 44%. In addition, in 1970, 28% of students were 25 years or older

and the number jumped to 39% in 1999 (NCES, 2002). Adult learners continue to be a growing student demographic. Approximately 44 percent of adults reported having participated in some form of formal adult educational activities (NCES, 2005). Enrollment for students over the age of 24 rose by 14% between 1995-2006 and NCES projected the same population to experience a 19% increase from 2006-2017 (NCES, 2009). Trends indicated that college student demographics are changing and research related to these trends is not keeping pace (Chao & Good, 2004; Pascarella & Terenzini, 1998). Continued research is necessary, as demographics of college students are shifting.

Though nontraditional students have become a fast-growing population on college campuses, research has yet to follow. Pascarella and Terenzini (1998), Kasworm, Sandman, and Sissel (2000), and Quinnan (1997) have all indicated that nontraditional student research has been marginalized. In a review of nontraditional student literature, Donaldson and Townsend (2007) developed a Classification Scheme of Scholarly Discourse about Adult Undergraduate Students. Through their research, they identified four perspectives prevalent in the literature. These perspectives include: a. invisible, b. acknowledged but devalued, c. accepted, and d. embraced (Donaldson & Townsend, 2007). Donaldson and Townsend (2007) highlight how nontraditional students have been relegated on college campuses, indicating that in almost 1,200 articles published during 1990-2003 in two journals focusing on college students, only a little over one percent focused on adult students. Donaldson and Townsend (2007) further state that the limited appearance of nontraditional students in the literature highlights the researcher's impact on the visibility of the nontraditional student and possibly subsequent research. By limiting focus, researchers may be ignoring the complexity of today's college campus.

Though research has not kept pace with nontraditional students, nontraditional students have certainly had an influence on college campuses. Examples regarding nontraditional students influences on institutional practice include when classes are offered, how often, and through what mediums (Donaldson & Graham, 2002; Graham, Donaldson, Kasworm, & Dirkx, 2000; Moore & Anderson, 2003). Other examples include distance learning offerings, accelerated programs and supporting technology that enables students to take classes from home. Pedagogy has also been impacted by the presence of nontraditional students as nontraditional students tend to bring more extensive prior knowledge and life experiences into the classroom than the traditional age student (Gibbons & Wentworth, 2001; Truman-Davis, Futch, Thompson, & Yonekura, 2000). As a result, faculty's understanding of the college student, expectations for those students, and how those students make meaning have changed (Graham et. al., 2000). The lack of interest or lack of understanding of the needs of nontraditional students can result in an institutions' inability to influence a group of learners who tend to perform better in the classroom, be more motivated than their traditional age counterparts, enrich the classroom, and bring intrinsic value to the institution (Lerner & King, 1992; Richardson & King, 1998). If enrollment trends maintain the increase in nontraditional student populations, a focus on recruitment and retention can only benefit the institution and the students it serves.

This study focused specifically on nontraditional students and factors that influence their persistence. The application of Bean and Metzner's (1985) persistence factors, defined by questions on the CCSSE, is not present in current research. Through the application of Bean and Metzner's (1985) persistence factors and utilization of the

CCSSE, the study explored whether the persistence factors could be defined by CCSSE items and if items could predict persistence. Findings may be able to provide insight to colleges seeking to create environments and provide programs and services that will increase nontraditional student persistence and retention.

Definition of Nontraditional Student

How an adult learner, or nontraditional student, is defined varies. The NCES indicates that a nontraditional student can exhibit one or more of seven characteristics (2002). Characteristics include:

- have delayed enrollment into postsecondary education
- attend part time
- are financially independent of parents
- work full time while enrolled
- have dependents other than a spouse
- are a single parent
- lack a standard high school diploma.

Using the NCES definition, approximately three-quarters of undergraduates can be classified as "nontraditional" (NCES, 2009). The definition provided by NCES also allows for a continuum of how nontraditional a student might be. Other researchers have defined nontraditional students as those at or above the age of 24 (Bean & Metzner, 1985; Cohen & Brawer, 1991; Ross, 1988; Stewart & Rue, 1983; Voorhees & Lingenfelter, 2003).

Other researchers have utilized characteristics beyond age to define the nontraditional student. Bean and Metzner (1985) went beyond age parameters of older than 24 to include a non-residential student and a student who is part-time, indicating that all or a combination of the three factors define a nontraditional student. Graham, Donaldson, Kasworm, and Dirkx (2000) indicate that nontraditional students spend

limited time on campus, limit their interactions outside the classroom, tend to be enrolled part-time, take courses during the evening and weekends, and commute to campus. While researchers cannot seem to agree upon a common definition of the nontraditional student, they can agree that nontraditional students have different characteristics and needs than a traditional age student.

For the purposes of this study, the age factor Bean and Metzner (1985) used to define the nontraditional student, a college student over the age of 24, was utilized. Bean and Metzner (1985) also included as part of their definition a student who attended college part-time, or commuted to campus. Because the definition is broad and the institution under study is primarily a commuter campus, this research was limited on the basis of age to include those nontraditional students over the age of 24.

Nontraditional Student Persistence Factors

Nontraditional students are influenced in different ways than a traditional age student and are forced to juggle a variety of responsibilities. In fact, two-thirds of nontraditional students defined their primary role as an employee, rather than a student (NCES, 2002). This understanding suggests that being a student is not their first priority and time and energy will be split among many personal and work demands (Chartrand, 1990).

Reasons for returning to college vary for nontraditional students. Many indicate they would like to complete a degree program they had previously started, while others are returning to improve job skills, for personal satisfaction, or for more magnanimous or altruistic goals, such as serving as a role model for their children (ACE, 2007; Kasworm, 1990; Luckie & Bonham, 1991; Pierson & Springer, 1988). Whether reasons are

pragmatic or personal, the reasons for returning college influence goals and expectations of the nontraditional student.

Though nontraditional students may return with intentions of completing programs, nontraditional students are less likely to attain their degree within 5 years and are more likely to leave college completely and not return (NCES, 2002). Many nontraditional students cite work responsibilities, family and other obligations that interfere with their ability to complete a degree (Chartrand, 1990). In addition, they lack social interaction with other students, may not feel confident in their abilities, and have financial demands beyond paying for school (Bauer & Mott, 1990; Novak & Thacker, 1991; Swift, Colvin, & Mills, 1987). These obstacles are compounded when institutional services are not focused on serving the specific needs of nontraditional students.

There is generally a broad range of services on college campuses that are designed to meet the needs of all of students. However, research has highlighted that traditional aged students and nontraditional students desire, and developmentally need, different services. As traditional age students enter college, they have a need to belong and establish their identity, and as a result, desire extracurricular activities and social programs (Chickering & Reisser, 1993; Hagerty, Lynch-Sauer, Patusky, Bouwsema, & Collier, 1992; Kasworm, 1982; Maslow, 1943). In contrast, the priority for services needed by nontraditional students include such things as: financial aid, job placement, personal counseling, and academic credit for life experiences (Byrd, 1990; Kasworm, 1982; Thon, 1984). The juxtaposition of services and apparent dichotomy in needs and priorities can confound colleges and universities, to the detriment of the student.

The ways in which nontraditional students make meaning of their college experience and engage and interact with the collegiate environment differ from those of traditional age college students. The nontraditional learner arrives on campus with life and work experiences. They have a desire to integrate previous learning and experiences with the new learning offered to them in the classroom (Cervero, 1988; Kasworm, 1997). In addition, connecting to the institution is done in alternative ways, through focusing on classroom interactions and making the classroom paramount to their academic experience (Bean & Metzner, 1985; Donaldson & Graham, 1999; Kasworm, 1997). Involvement in outside classroom activities becomes secondary to what occurs through coursework and campus engagement occurs primarily in the classroom.

The external environment plays a crucial role for nontraditional students. Bean and Metzner (1985) indicated that encouragement from family and community appears to replace social engagement on campus. Tinto (1987) supported this assertion, modifying his initial assertion that social congruency is a primary component for success, and indicating that for the nontraditional student, external factors become of primary importance. Other researchers also maintain that support from outside sources are more powerful influences for the nontraditional student because they live, work, and socialize outside of the college community (Kasworm, 1990, 1995; Kasworm & Blowers, 1994). Factors such as a tendency to a have full-time job, part-time student status, and/or be a commuter student, encourages campuses to re-frame the idea of campus involvement and make the college classroom central to engagement and connection for the nontraditional student (Graham, Donaldson, Kasworm, Dirkx, 2000) .

As the presence of nontraditional students became more prevalent, it became clear that nontraditional students were influenced in different ways toward their academic goals. In 1985, Bean and Metzner developed the Nontraditional Undergraduate Student Attrition Model that identified four sets of persistence factors that influence a nontraditional student's decision to persist. They include: (a) academic outcome; (b) intent to leave, which is influenced primarily by psychological outcomes and academic variables; (c) background and defining variables; and (d) environmental variables (Bean and Metzner, 1985).

The main assertion made by Bean and Metzner (1985) is that nontraditional students are impacted less by social networking and connections made on campus than by the external environment. Others would support this assertion, indicating that nontraditional students serve in many other roles beyond being a student, and external factors serve as either obstacles or support for the adult learner (Darkenwald & Merriam, 1982; Rovai, 2003). Understanding the influences on nontraditional students' decision to persist can enable institutions to provide services and environments that enhance participation, support the management of student's time and energy, and minimize obstacles. The CCSSE provides an opportunity for college campuses to further explore student persistence factors.

Community College Survey of Student Engagement (CCSSE)

The CCSSE instrument works in conjunction with the National Survey of Student Engagement (NSSE), which was established in 1998 (CCSSE, 2010). NSSE developers acknowledged the need for community college research that took into account the distinctive mission of community colleges and community college student demographics

(CCSSE, 2010). Consequently, the Community College Leadership Program at the University of Texas at Austin established the CCSSE. The CCSSE was initially administered in 2001 and is currently advised by two national advisory groups (CCSSE, 2010). The CCSSE measures institutional practices and student behavior that correlate to student engagement and can be utilized as a benchmarking instrument to establish national norms, a diagnostic tool, and a monitoring device to track institutional effectiveness (CCSSE, 2010). It is a pencil and paper test with 37 main questions, and 122 subset questions.

The CCSSE includes five benchmark categories including: Active and Collaborative Learning, Student Effort, Academic Challenge, Student-Faculty Interaction, and Support for Learners (CCSSE, 2010). In 2006, McClenney and Marti conducted research to measure the validity of the CCSSE. The results of their research confirm that CCSSE items and student outcomes are positively related (McClenney & Marti, 2006). In particular, two benchmarks that have been proven to be significant variables related to retention include: Support for Learners and Student Services (McClenney & Marti, 2006). These two benchmarks are also associated with Bean and Metzner variables, including influences from: external variables, academic variables, and psychological outcomes. Understanding the roles these factors play in students' lives can enhance opportunities to improve retention, as well as provide researchers opportunities to expand the use of current instruments to assess the likelihood of persistence of nontraditional students.

Summary

An understanding of student retention and persistence theories and models can offer a foundation to explore factors that influence attrition. The growing presence of nontraditional students on campus implores researchers to continue to explore and build upon retention theories in order to fully understand the nontraditional students' unique attributes, motivations and influences. Though various definitions of a nontraditional student can confound research, the multiple characteristics that define nontraditional students also create unique needs and motivations. The CCSSE provides an instrument to measure characteristics and influences on the community college student in order to explore variables that can influence retention.

Understanding factors that influence student retention is critical to developing campuses that are learning-centered and promote student success and completion of academic goals. However, a one-size-fits-all mode of thinking can create failure and frustration for the student, as well as constrain campus resources. As the nontraditional student population continues to grow, it has become increasingly critical for campuses to redefine how they might meet the needs of the nontraditional student. Policies, services, and pedagogy need to be explored and perhaps reconfigured to adapt to the changing environment our students demand and deserve. Chapter Three presents a methodology for identifying persistence factors within the context of existing assessment instruments in order to predict the likelihood of nontraditional student persistence.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

Chapter Two provided a review of related literature, which outlined different reasons for attrition among students. The literature also indicates that nontraditional students are engaged in college in different ways than traditional-aged students.

Chapter Three will be presented in five sections. First an overview of the problem and rationale will be provided. Next, the purpose of the study will be discussed. Third, research questions and hypotheses will be made available. Finally, research methodology will be provided, which will include: the research design, data collection, the study group, instrumentation and data analysis. Items presented will be used to answer the research questions and challenge the null hypotheses.

Rationale

The number of nontraditional students returning to college continues to grow, specifically community colleges (Horn & Carroll, 1996, 2004; NCES, 2005, 2009). However, nontraditional students are more likely than traditional students to leave postsecondary education without completing a degree or certificate (Bean and Metzner, 1985; Horn & Carroll, 1996). Thus, retention of nontraditional students has become of increasing interest. Bean and Metzner (1985) have identified primary factors that affect nontraditional student persistence and attrition. Persistence factors include: Academic Outcome, Background/Defining Variables, Intent to Leave, and Environmental Variables (Bean & Metzner, 1985). However, there is limited current research addressing how Bean and Metzner's (1985) persistence factors influence persistence and/or attrition of nontraditional community college students (Kasworm & Pike, 1994; Metzner & Bean,

1987; Sandler, 1998, 2000; Stolar, 1991). In addition, there is a lack of research comparing Bean and Metzner's (1985) variables to questions on the CCSSE. Finally, there is a lack of research exploring nontraditional student persistence through the use of CCSSE items.

There has been limited research in examining community colleges and specifically, attrition rates at community colleges (Cofer & Somers, 2000; McClenney & Marti, 2006; Stahl & Pavel, 1992; Townsend, Donaldson, & Wilson, 2004; Wortman & Napoli, 1996). With the increasing presence of nontraditional students at community colleges, research exploring this particular demographic becomes increasingly important (NCES, 2009). Bean and Metzner (1985) offered their Nontraditional Undergraduate Student Attrition Model as one theoretical model to examine variables that impact a nontraditional student's likelihood to persist. In Bean and Metzner's (1985) model, they address environmental variables such as academic advising and transfer support, as well as nontraditional student behavior, such as absenteeism and commitment to goals. The CCSSE measures student behavior, institutional practices at the community college, and experiences that exert influence on the student (McClenney & Marti, 2006; CCSSE, 2010). In addition, the use of the CCSSE has become more prevalent with almost half of public community colleges in the United States participating in the CCSSE (CCSSE, 2010). Finally, several states are utilizing CCSSE as part of their accountability systems statewide (CCSSE, 2010).

As the use of the CCSSE becomes more prevalent, institutional researchers may benefit in utilizing specific questions to test for and predict the level of engagement and persistence in college. Subsequently, identifying meaningful persistence factors may

allow administrators to predict the likelihood of persistence of nontraditional students in community colleges and influence those factors in order to increase persistence into the second year, and ultimately toward completion. The four variables have been identified by the researcher as related to questions on the CCSSE, so for the purpose of this study, the researcher focused on: Academic Outcomes, Background/Defining Variables; Intent to Leave, as measured by psychological outcomes and academic variables, and Environmental Variables.

Statement of the Problem

There is a lack of recent information regarding how levels of engagement and integration impact a nontraditional student's likelihood to persist to the second year as measured by selected survey items on the CCSSE. There is also a lack of research applying the persistence factors identified by Bean and Metzner (1985) to engagement as defined by the CCSSE. Finally, it has been observed that the institution under study is seeking information to enhance the persistence of its nontraditional student population.

Purpose of the Study

The purpose of the study was to correlate Bean and Metzner (1985) persistence factors to survey items on the CCSSE in order to understand if the factors predict nontraditional students' persistence to the second year at a community college. For the purposes of this study, the definition of nontraditional student was limited to those over the age of 24.

Research Questions and Hypotheses

The following research questions were developed to guide the research, and address the research problem. Framed by the problem and the purpose of the study, the

following research questions will be investigated and the null hypothesis is presented after each question when appropriate:

RQ1. What CCSSE items best define Bean and Metzner persistence factors?

RQ2. What are the overall descriptive statistics for the 40 CCSSE questions under study?

RQ3. Is there a relationship in behavior of nontraditional students, as defined by 40 questions on the CCSSE, and the dependent variable of persistence?

H_o3 – There is no relationship between behavior in nontraditional students that persist into the second year and those that do not. Alpha level of 0.10

RQ 4. Can regression models of CCSSE independent variables be constructed to predict persistence of nontraditional students within factors under study?

H_o4 – There are no significant models among and between CCSSE independent variables that best predicts nontraditional student persistence as measured by CCSSE. Alpha level of 0.10

Methodology

The following section describes the research design, study group, data collection, instrumentation, and data analysis proposed for the completion of this study. Tables of the primary persistence factors that correspond to the CCSSE will also be provided.

Research Design

The research design was non-experimental using blinded archival data. The sample of student data was archival, non-parametric survey design, non-random with nominal and ordinal data, with one dependent variable of persistence and 40 independent

variables, also clustered into Bean and Metzner (1985) persistence factors. For additional clarification, see Tables 2-5.

Validity Panel

The researcher conducted a preliminary identification of CCSSE items that were determined to provide face validity to the four persistence factors identified by Bean and Metzner (1985). For the purposes of this study, 40 items on the CCSSE were initially determined to be relevant and were related to Bean and Metzner (1985) persistence factors. Relevancy was determined by reviewing the definitions provided by Bean and Metzner in their 1985 study.

The researcher identified a validity panel to establish content validity to the selected CCSSE items and the persistence factors defined by Bean and Metzner (1985). The validity panel was comprised of faculty and staff at various community colleges who have worked closely with nontraditional students in a research or administrative role, and had experience working with assessment instruments. The panel members were sent an email describing the research, providing them with Bean and Metzner's (1985) variables, and the corresponding CCSSE questions and answers. See Appendix A. The validity panel members were then asked to validate the face validity made by the researcher by responding "Yes" if they believed there was a relationship, "No" if they did not believe there was a relationship, or "Don't Know/Unsure" if they were unsure of a relationship. The validity panel was then asked to return their responses via email to the researcher to compile aggregate data.

Study Group

Participants in the study were nontraditional, first time freshmen enrolled at the institution under study in the spring terms of 2007, 2008, and 2009 that completed the CCSSE in April of the corresponding years. The institution under study is located in a rural, agricultural-based community with high economic need. The majority of students at the institution are Caucasian and 85% receive financial aid. The study group will include only nontraditional students (above the age of 24) who completed the CCSSE. A summary description will be provided to fully describe the study group.

In addition to completing the survey, students must have provided personally-identifiable information (student ID number) to track enrollment in the following fall semester. Students not completing the survey or not providing their student ID number have been excluded from the study.

The students have been classified as persistent or non-persistent, as determined by the Registrar's Office. Those classified as persistent enrolled in the following summer or fall semester after taking the CCSSE. Those classified as non-persistent did not enroll in either the following summer or fall semester.

Data Collection

The information requested is archival data collected at the community college as part of a routine data collection by the Institutional Research Department at the community college. The CCSSE was administered by the Institutional Research Department during randomly-selected classes containing both traditional and non-traditional students that were chosen by CCSSE administrators during the spring term.

Those in selected classes completed the paper and pencil survey as a required part of the class. Student names were not provided to the researcher. The CCSSE was given in 2007, 2008, and 2009 at the institution under study. Three sets of data were available and used in the research. Data access was gained by requesting permission from the college president and obtained through the institutional researcher at the college. See Appendix A for Letter of Permission. All data were stored electronically on Excel spreadsheets and transferred to SPSS Version 18 for analysis (SPSS, Inc., Chicago, IL). Data were password protected and blinded to the researcher.

Instrumentation – CCSSE Survey

The CCSSE has been administered nationally since 2001 and measures institutional practices and student behavior that correlate to student engagement (CCSSE, 2010). The CCSSE works in partnership with the National Survey of Student Engagement (NSSE), which is headquartered at Indiana University in the Center for Postsecondary Research and Planning. CCSSE is headquartered in the Community College Leadership Program at the University of Texas Austin (CCSSE, 2010). The CCSSE can be utilized as a benchmarking instrument to establish national norms, a diagnostic tool, and a monitoring device to track institutional effectiveness. It is a pencil and paper test with 37 main questions, and 122 subset questions.

Data included in this study were 40 questions/subset questions on the CCSSE that were determined by the researcher and validity panel as meeting the four different Bean and Metzner persistence factors (Academic Outcome, Background/Defining Variables, Intent to Leave, and Environmental Variables). See Tables 2-5. The variables evaluate how students spend their time, what they have gained through their college education,

assessment of relationships and challenges and support they have found on campus. For the purposes of this study, the 40 CCSSE items selected were initially determined by the researcher to be relevant to Bean and Metzner's (1985) persistence factors. A validity panel confirmed CCSSE items that were germane to the persistence factors identified by Bean and Metzner (1985). Enrollment status and ethnicity will not be considered for use in this study, because the study was limited to only those items in Tables 2-4. The corresponding CCSSE items and answers are contained in Tables 2-4.

Data analysis

Research questions were constructed to guide the data analysis. A detailed plan was developed (see Table 1) and all research questions were explored through the plan. Statistical analyses in the study were conducted using SPSS statistical software, Version 18.0 (SPSS, Inc., Chicago, IL).The independent variables in the study were the 40 items on the CCSSE. The dependent variable was persistence after the first year of college. Independent variables were grouped into the four persistence factors identified by Bean and Metzner (1985) that included: Academic Outcome (see Table 2) Background/Defining Variables (see Table 3), Intent to Leave (see Table 4), and Environmental Variables (see Table 5).

Table 1.
Research Plan with Questions and Analysis

Research Question	Analysis
RQ1. What CCSSE items best define Bean and Metzner persistence factors?	Validity Plan - A panel of experts was identified to determine those CCSSE questions that could define Bean and Metzner (1985) persistence factors. The qualifications of the panel included faculty and staff from different institutions who were familiar with the CCSSE and worked closely with nontraditional students in varying capacities.
RQ2. What are the overall descriptive statistics for the 40 CCSSE questions under study?	SPSS, Version 18 was used to explore frequency and percentages for the selected 40 CCSSE questions.
RQ3. Is there a relationship in behavior of nontraditional students, as defined by 40 questions on the CCSSE, and the dependent variable of persistence?	A Chi Square test was used to investigate whether the distribution of answers to each selected CCSSE question differs from one another according to the dependent variable of persistence. An Alpha level of 0.10 was used. According to Statistical Consulting Services at UCLA, the Chi-Square test measures the alignment between two sets of frequency measures and data must be categorical (UCLA Academic Technology Services, n.d.). The selected CCSSE questions are found in Table 2, Table 3, Table 4, and Table 5.
RQ4. Can regression models of CCSSE independent variables be constructed to predict persistence of nontraditional students within factors under study?	A Logistic Regression test, with an Alpha level of 0.10 was conducted for three Bean and Metzner (1985) persistence factors under study. Logistic regression is used for prediction of the probability of occurrence of an event when the dependent variable is nominal and there is more than one independent variable (McDonald, 2009). The 40 CCSSE questions were clustered into three Bean and Metzner persistence factors, as identified in each of the following tables:

	Background/Defining Persistence Factor questions – See Table 54 Intent to Leave Persistence Factor questions with two sub clusters, to include academic and psychological outcomes – See Table 55 Environmental Persistence Factor questions – See Table 56

Table 2.
Academic Outcome Persistence Factor, as Correlated to CCSSE Questions

Academic Outcome Variable	CCSSE Question that correlates	Definition/Answers
Academic Outcome	Q. 21 At this college, in what range is your overall college grade average?	A. A B. A- to B+ C. B D. B- to C+ E. C F. C- or lower G. Do not have a GPA at this school H. Pass/fail classes only

Table 3.
Background/Defining Persistence Factor, as Correlated to CCSSE Questions

Background/Defining Variables	CCSSE Question that correlates	Definition/Answers
Age	Q. 29 Mark your age group	A. Under 1 B. 18 to 19 C. 20 to 21 D. 22 to 24 E. 25 to 29 F. 30 to 39 G. 40 to 49 H. 50 to 64 I. 65+

Educational Goals	Q. 17 Indicate which of the following are your reasons/goals for attending this college.	A. Complete a certificate program B. Obtain an associate degree C. Transfer to a 4-year college or university D. Obtain or update job-related skills E. Self-improvement/personal enjoyment F. Change careers
Gender	Q. 30 Your sex	A. Male B. Female

Table 4.
Intent to Leave Persistence Factor, as Correlated to CCSSE Questions

Intent to Leave Variable	CCSSE Question that correlates	Definition/Answers
Utility/Practicality of Getting a Degree – Personal Development (Psychological Outcome)	Q.12 How much has your experience at this college contributed to your knowledge, skills, and personal development in the following areas: h. Working effectively with others	A. Very much B. Quite a bit C. Some D. Very Little
Utility/Practicality of Getting a Degree – Personal Development (Psychological Outcome)	Q.12 How much has your experience at this college contributed to your knowledge, skills, and personal development in the following areas: i. Learning effectively on your own	A. Very much B. Quite a bit C. Some D. Very Little
Utility/Practicality of Getting a Degree – Personal Development (Psychological Outcome)	Q.12 How much has your experience at this college contributed to your knowledge, skills, and personal development in the following areas: j. Understanding yourself	A. Very much B. Quite a bit C. Some D. Very Little

Utility/Practicality of Getting a Degree – Personal Development (Psychological Outcome)	Q.12 How much has your experience at this college contributed to your knowledge, skills, and personal development in the following areas: k. Understanding people of other racial and ethnic backgrounds	A. Very much B. Quite a bit C. Some D. Very Little
Utility/Practicality of Getting a Degree – Personal Development (Psychological Outcome)	Q.12 How much has your experience at this college contributed to your knowledge, skills, and personal development in the following areas: l. Developing a personal code of values and ethics	A. Very much B. Quite a bit C. Some D. Very Little
Utility /Practicality of Getting a Degree – Usefulness for Employment Opportunities (Psychological Outcome)	Q. 12 How much has your experience at this college contributed to your knowledge, skills, and personal development in the following areas: b. Acquiring job or work-related knowledge and skills	A. Very much B. Quite a bit C. Some D. Very little
Utility/Practicality of Getting a Degree – Usefulness for Employment Opportunities (Psychological Outcome)	Q.12 How much has your experience at this college contributed to your knowledge, skills, and personal development in the following areas: n. Developing clearer career goals	A. Very much B. Quite a bit C. Some D. Very little
Utility/Practicality of Getting a Degree – Usefulness for Employment Opportunities (Psychological Outcome)	Q.12 How much has your experience at this college contributed to your knowledge, skills, and personal development in the following areas: o. Gaining information about career opportunities	A. Very much B. Quite a bit C. Some D. Very little
Student Satisfaction with Educational Experience (Psychological Outcome)	Q. 27 How would you evaluate your entire educational experience at this college?	A. Excellent B. Good C. Fair D. Poor

Goal Commitment (Psychological Outcome)	Q. 4 In your experiences at this college during the current school year, about how often have you done each of the following: p. Worked harder than you thought you could to meet an instructor's standards or expectations.	A. Very Often B. Often C. Sometimes D. Never
Goal Commitment (Psychological Outcome)	Q. 20 When do you plan to take classes at this college again?	A. I will accomplish my goal(s) during this term and will not be returning B. I have no current plan to return C. Within the next 12 months D. Uncertain
Stress of Attending (Psychological Outcome)	Q. 9 How much does this college emphasize each of the following: b. Providing the support you need to help you succeed at this college	A. Very much B. Quite a bit C. Some D. Very little
Stress of Attending (Psychological Outcome)	Q. 9 How much does this college emphasize each of the following: d. Helping you cope with your non-academic responsibilities	A. Very much B. Quite a bit C. Some D. Very little
Stress of Attending (Psychological Outcome)	Q. 9 How much does this college emphasize each of the following: e. Proving the support you need to thrive socially	A. Very much B. Quite a bit C. Some D. Very little
Study Habits (Academic)	Q. 4 In your experiences at this college during the current school year, about how often have you done each of the following: c. Prepared two or more drafts of a paper or assignment before turning it in	A. Very often B. Often C. Sometimes D. Never

Studying Habits (Academic)	Q. 4 In your experiences at this college during the current school year, about how often have you done each of the following: e. Come to class without completing readings or assignments	A. Very often B. Often C. Sometimes D. Never
Study Habits (Academic)	Q. 4 In your experiences at this college during the current school year, about how often have you done each of the following: g. Worked with classmates outside of class to prepare class assignments	A. Very often B. Often C. Sometimes D. Never
Study Habits (Academic)	Q. 6 During the current school year, about how much reading and writing have you done at this college: a. Number of assigned textbooks, manual, books, or book-length packs of course readings	A. None B. 1 to 4 C. 5 to 10 D. 11 to 20 E. More than 20
Study Habits (Academic)	Q. 6 During the current school year, about how much reading and writing have you done at this college: c. Number of written papers or reports of any length	A. None B. 1 to 4 C. 5 to 10 D. 11 to 20 E. More than 20
Study Habits (Academic)	Q. 10 About how many hours do you spend in a typical 7-day week doing each of the following? a. Preparing for class (studying, reading, writing, rehearsing, doing homework, or other activities related to your program)	A. None B. 1-5 C. 6-10 D. 11-20 E. 21-30 F. More than 30
Academic Advising (Academic)	Q. 13, Section 2, Part a. Please answer…HOW SATISFIED you are with the services: Academic advising/planning	Satisfaction A. Very B. Somewhat C. Not at all D. N.A.

Absenteeism (Academic)	Q. 4 In your experiences at this college during the current school year, about how often have you done each of the following: u. Skipped class	A. Very often B. Often C. Sometimes D. Never

Table 5.
Environmental Persistence Factor, as Correlated to CCSSE Questions

Environmental Variable	CCSSE Question that correlates	Definition/Answers
Finances	Q. 9 How much does this college emphasize each of the following? f. Providing the financial support you need to afford your education	A. Very much B. Quite a bit C. Some D. Very little
Finances	Q. 14. How likely is it that the following issues would cause you to withdraw from class or from this college? d. Lack of finances	A. Very likely B. Likely C. Somewhat likely D. Not likely
Hours of Employment	Q. 10 About how many hours do you spend in a typical 7-day week doing each of the following? b. Working for pay	A. None B. 1-5 C. 6-10 D. 11-20 E. 21-30 F. More than 30
Hours of Employment	Q. 14. How likely is it that the following issues would cause you to withdraw from class or from this college a. Working full-time	A. Very likely B. Likely C. Somewhat likely D. Not likely
Outside Encouragement	Q. 15 How supportive are your friends of you attending this college?	A. Extremely B. Quite a bit C. Somewhat D. Not very
Outside Encouragement	Q. 16 How supportive is your immediate family of your attending this college?	A. Extremely B. Quite a bit C. Somewhat D. Not very

Family Responsibilities	Q. 14. How likely is it that the following issues would cause you to withdraw from class or from this college b. Caring for dependents	A. Very likely B. Likely C. Somewhat likely D. Not likely
Family Responsibilities	Q. 28 Do you have children who live with you?	A. Yes B. No
Family Responsibilities	Q. 31 Are you married?	A. Yes B. No
Family Responsibilities	Q. 10 About how many hours do you spend in a typical 7-day week doing each of the following? d. Providing care for dependents living with you (parents, children, spouse, etc)	A. None B. 1-5 C. 6-10 D. 11-20 E. 21-30 F. More than 30
Opportunity to Transfer	Q. 13, Section 1, Part j. HOW OFTEN you use the following services – Transfer credit assistance	Frequency of Use A. Often B. Sometimes C. Rarely/Never D. Don't Know/N.A.
Opportunity to Transfer	Q. 13, Section 2, Part j. HOW SATISFIED you are with the services – Transfer credit assistance	Satisfaction A. Very B. Somewhat C. Not at all D. N.A
Opportunity to Transfer	Q. 13, Section 3, Part j. How important the services are to you at this college – Transfer credit assistance	Importance A. Very B. Somewhat C. Not at all
Opportunity to Transfer	Q. 14. How likely is it that the following issues would cause you to withdraw from class or from this college e. Transfer to a 4-year college or university	A. Very Likely B. Likely C. Somewhat likely D. Not likely

Summary

The selected institution of study was an open admission Midwestern, two-year public community college enrolling a freshman class of approximately three hundred

students. The participants under study were nontraditional (above the age of 24) first-year students. A panel of experts was used to validate the identified CCSSE questions had face validity to Bean and Metzner persistence factors. Frequencies and percentages were calculated from 40 selected behaviors identified on the CCSSE, that were related with Bean and Metzner's (1985) identified persistence factors. A Chi Square analysis using alpha level 0.10 was made to determine if there was a relationship among and between independent variables and nontraditional students that persisted into the second year and those that did not. Finally, a Logistic Regression test using alpha level 0.10 was used to develop a prediction formula to predict membership within factors under study.

Results from data collected and analyzed will be reported in Chapter Four. Chapter Five will provide a discussion of the findings, recommendations, and the summation of this study.

CHAPTER 4

PRESENTATION AND ANALYSIS OF DATA

Understanding factors that influence a nontraditional student's likelihood to persist is the overarching purpose of this study. Traditional models of student persistence do not apply to the ways in which the nontraditional student experiences the institution and there are influences beyond age that influence the nontraditional student (Kasworm, 1990; Robertson, 1991). This chapter will outline the problem and purpose of the study, design of the study, and a summary of findings.

Problem and Purpose Overview

The purpose of this study was to determine if persistence factors identified by Bean and Metzner (1985), as defined by items on the CCSSE, could be used to predict persistence of nontraditional students. As discussed in Chapter Two, traditional notions of engagement and persistence do not apply to nontraditional students. Although the nontraditional student population is increasing, there is still a lack of research regarding factors that influence nontraditional student persistence. Specifically, there is a lack of research focusing on persistence factors as measured by items on the CCSSE that influence a nontraditional student's decision to persist. Bean and Metzner's Nontraditional Undergraduate Student Attrition Model (1985) provides a conceptual framework for researchers seeking to understand influences on a nontraditional student's likelihood to persist. Bean and Metzner (1985) organized persistence factors into four areas, which include: Academic Outcome, Background/Defining Variables, Intent to Leave, and Environmental Variables. Bean and Metzner's (1985) theory continues to be cited and explored in various research and literature (Perry, Boman, Care, Edwards &

Park, 2008; Stahl & Pavel, 1992; Wade, 1995). However, there is a lack of research applying Bean and Metzner's (1985) theory to the CCSSE. By applying Bean and Metzner's (1985) persistence factors to items on the CCSSE, the CCSSE could be used as an instrument to predict persistence of nontraditional students.

Design of the Study

The scope of this research was limited to data collected by a single institution. The study examined one dependent variable and 40 independent variables that consisted of nominal data. The dependent variable, persistence, was divided into two categories: those students that persisted from the spring into the following summer or fall semesters immediately following completion of the spring semester, and those that did not persist. A validity panel was conducted to determine if the 40 CCSSE items related to the persistence factors identified by Bean and Metzner (1985). A Chi Square test was used to investigate the distribution of answers to CCSSE items and the dependent variable. Finally, logistic regression tests were used to determine the probability of persistence based on the Bean and Metzner (1985) persistence factors.

In the spring of 2007, the institution under study began administering the CCSSE. The CCSSE was also administered in the spring of 2008 and spring of 2009. Classes were randomly selected by CCSSE administrators and surveys were distributed to students in those classes. Students included both traditional and nontraditional aged students, full-time and part-time, as well as degree-seeking and non-degree seeking. The survey consisted of multiple questions exploring a wide variety of areas. Responses were collected and sent to CCSSE administrators for compilation and aggregation. Data from the past 3 CCSSE instruments were requested and sent in encrypted form to the

institutional research department at the institution under study. The three survey years, 2007, 2008, and 2009 were combined for a total of 1,091 respondents. Responses from 557 respondents were removed due to the absence of a student identification number. In addition, those students identifying themselves as 24 years of age or younger were eliminated from consideration. Data from 153 identified respondents resulted and were included in this study. Further details regarding respondents included in this research are identified in the Study Group section.

There were 40 CCSSE questions preliminarily identified by the researcher as items that defined the persistence factors identified by Bean and Metzner (1985). These questions were reviewed by a validity panel consisting of community college leaders who had experience working with nontraditional students and assessment tools. Results of the validity panel review are discussed in the Data Analysis section.

Responses to the identified CCSSE questions from the two groups, those students that persisted and those that did not persist, were explored. Data analysis was then completed to answer the four research questions.

Study Group

The study group consisted of students at the selected institution who completed the CCSSE during spring 2007, 2008, and 2009, semesters. Respondents identified as nontraditional students for the purpose of the study were those students who self-reported their age on the CCSSE instrument as being older than 24 years of age. Subsequently, the Institutional Research Department at the institution under study provided the researcher with CCSSE responses for the following groups: all nontraditional students, those that persisted, and those that did not persist. Because the CCSSE is institutional data, the

institutional research department secured informed consent from participants through its customary assessment procedures. Finally, the Institutional Research Department protected the confidentiality of participants prior to investigation of the data.

The final study consisted of 153 respondents that contained student identification numbers and identified themselves as 25 years of age or older. The remaining 153 responses were divided into two categories, including those who persisted into the following summer or fall for a total of 102 responses, and those that did not persist with a total of 51 responses

Data Analysis

The study utilized a validity panel to determine if a relationship existed between CCSSE items and the four persistence factors identified by Bean and Metzner (1985). In addition, three statistical analyses were utilized to educe meaning and assist in answering the research questions. Statistical analysis was conducted using SPSS version 18.0 software. Descriptive frequency analyses were used to explore frequency and percentages for the responses to the selected CCSSE questions. A Chi Square test was employed to investigate whether the distribution of answers to each selected CCSSE question differed from other CCSSE questions according to the dependent variable of persistence. Finally, a Pearson Correlation Logistic Regression Test was conducted for the persistence factors to predict the probability of persistence based on the independent variables.

Validity Panel

For the validity panel, the CCSSE questions were divided into the four persistence factors and a description of the persistence factors was provided for ease of understanding (see Table 58). The description and questions were sent to the five

members of the validity panel, along with a brief description of the research project. Each panel member was asked to respond with a "Yes," "No," or "Don't know/Unsure," if they believed the persistence factor related to the identified CCSSE item. A simple majority vote was used to determine if a relationship existed.

For the Academic Outcome persistence factor, all panel members agreed that the individual variables identified by Bean and Metzner (1985) could be defined by using CCSSE items. Regarding the Background/Defining Variable persistence factor, three CCSSE questions were preliminarily identified by the research as being related to Bean and Metzner's (1985) persistence factors. All panel members agreed. With the Intent to Leave persistence factor, 22 questions were preliminarily identified as having a correlation to the persistence factor. From the 22 questions, there were ten questions that had an "Unsure" response from one of the panel members. In addition, there were two questions from the 22 questions that one panel member marked "No," though the rest of the panel members had a "Yes" response (see Table 6). The Environmental persistence factor contained 14 identified questions. Two panel members marked "Unsure" on one question. Another question also received one "Unsure" response. The remaining items received a "Yes" response (see Table 7).

Table 6.
Intent to Leave Persistence Factor- Validity Plan Results

Q.12 How much has your experience at this college contributed to your knowledge, skills, and personal development in the following areas: i. Learning effectively on your own	Yes – 4 No - 0 Don't know/Unsure – 1

Q.12 How much has your experience at this college contributed to your knowledge, skills, and personal development in the following areas: j. Understanding yourself	Yes – 4 No - 0 Don't know/Unsure – 1
Q.12 How much has your experience at this college contributed to your knowledge, skills, and personal development in the following areas: k. Understanding people of other racial and ethnic backgrounds	Yes – 4 No - 0 Don't know/Unsure – 1
Q.12 How much has your experience at this college contributed to your knowledge, skills, and personal development in the following areas: l. Developing a personal code of values and ethics	Yes - 4 No - 0 Don't know/Unsure – 1
Q.12 How much has your experience at this college contributed to your knowledge, skills, and personal development in the following areas: n. Developing clearer career goals	Yes - 4 No - 0 Don't know/Unsure – 1
Q.12 How much has your experience at this college contributed to your knowledge, skills, and personal development in the following areas: o. Gaining information about career opportunities	Yes - 4 No - 0 Don't know/Unsure – 1
Q. 4 In your experiences at this college during the current school year, about how often have you done each of the following: p. Worked harder than you thought you could to meet an instructor's standards or expectations.	Yes - 4 No - 0 Don't know/Unsure – 1

Q. 9 How much does this college emphasize each of the following: b. Providing the support you need to help you succeed at this college	Yes - 4 No - 1 Don't know/Unsure – 0
Q. 9 How much does this college emphasize each of the following: e. Proving the support you need to thrive socially	Yes - 4 No - 1 Don't know/Unsure – 0
Q. 4 In your experiences at this college during the current school year, about how often have you done each of the following: g. Worked with classmates outside of class to prepare class assignments	Yes - 4 No - 0 Don't know/Unsure – 1
Q. 6 During the current school year, about how much reading and writing have you done at this college: a. Number of assigned textbooks, manual, books, or book-length packs of course readings	Yes – 4 No - 0 Don't know/Unsure – 1
Q. 6 During the current school year, about how much reading and writing have you done at this college: c. Number of written papers or reports of any length	Yes – 4 No - 0 Don't know/Unsure – 1

Table 7.
Environmental Persistence Factor – Validity Plan Results

Q. 31 Are you married?	Yes – 3 No - 0 Don't know/Unsure – 2

Q. 14. How likely is it that the following issues would cause you to withdraw from class or from this college e. Transfer to a 4-year college or university	Yes – 4 No - 0 Don't know/Unsure – 1

Based on the responses from the validity panel, it was determined that the identified CCSSE items could be used to define Bean and Metzner's (1985) persistence factors. Descriptive statistics for each of these items will be discussed in the next section.

Descriptive Statistics and Chi Squares For Non-Significant CCSSE Items

Descriptive analysis, including frequencies and percentages, was conducted for each of the independent variables and findings were compared to Bean and Metzner's (1985) theory. Descriptive statistics were presented for only those items without statistical significance. Items with statistical significance will be presented in the Chi Square test section.

Persistence factor. Table 8 represents the summary statistics for those students who persisted and those that did not persist. Of the respondents included in the research, approximately 67% persisted into the summer or fall semester.

Table 8.
Frequency of Persistence of Nontraditional Students (Over Age 24)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Persisted	102	66.7	66.7	66.7
	Did not persist	51	33.3	33.3	100.0
	Total	153	100.0	100.0	

Academic outcome persistence factor. Table 9 represents the summary statistics for the Academic Outcome persistence factor, which includes GPA. As shown in Table 9a, there was not a significant difference (Chi Sq = 10.589; p-value= 0.158) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

The majority of respondents, approximately 69%, report their overall grade point average as a B grade or higher, with the largest percentage in the "A- to B+" category. Bean and Metzner (1985) indicate that attrition rates are affected by GPA as a result of institutional policy. If the student earns poor grades, the study may be involuntarily removed from the institution. It could be anticipated that students who receive higher grades have higher persistence rates. A very small percentage of the respondents, 3.9%, indicate that they are receiving a C- or lower GPA. GPA was not found to be a determinant of persistence.

Table 9.

Frequency of Overall Grade Point Average

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Pass/fail classes only	1	.7	.7	.7
	Do not have a GPA at this school	3	2.0	2.0	2.6
	C- or lower	6	3.9	3.9	6.5
	C	11	7.2	7.2	13.7
	B-to C+	27	17.6	17.6	31.4
	B	43	28.1	28.1	59.5
	A- to B+	48	31.4	31.4	90.8
	A	14	9.2	9.2	100.0
	Total	153	100.0	100.0	

Table 9a.

Chi Square for Overall Grade Point Average

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.589[a]	7	.158
Likelihood Ratio	14.229	7	.047
Linear-by-Linear Association	.323	1	.570
N of Valid Cases	153		

a. 8 cells (50.0%) have expected count less than 5. The minimum expected count is .33.

Background/defining variables persistence factor. In Table 10 and Table 11, the summary statistics for the Background and Defining persistence factors that were not found to be significant are presented. These items include: age, educational goals, and gender (Bean & Metzner, 1985). Only one variable pertaining to educational goals, defined by the CCSSE item "Complete A Certificate Program," proved to be statistically significant and is discussed in the Chi Square test analysis.

Regarding age, as shown in Table 10a there was not a significant difference (Chi Sq = 0.283; p-value= 0.963) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

In Table 10, the majority of respondents indicate that they are between the ages of 30 and 39. Three-fourths of the nontraditional student respondents are under the age of 40. Bean and Metzner (1985) indicate that age has indirect effects on the student and older students will have more factors that pull them away from school, such as increased family responsibilities and hours of employment. As a result of Bean and Metzner's (1985) research, older students would be expected to have higher attrition rates. No statistical significance was found as a result of research.

Table 10.

Frequency of Age Group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	25 to 29	49	32.0	32.0	32.0
	30 to 39	69	45.1	45.1	77.1
	40 to 49	22	14.4	14.4	91.5
	50 to 64	13	8.5	8.5	100.0
	Total	153	100.0	100.0	

Table 10a

Chi-Square for Age Group

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.283[a]	3	.963
Likelihood Ratio	.279	3	.964
Linear-by-Linear Association	.004	1	.949
N of Valid Cases	153		

a. 1 cells (12.5%) have expected count less than 5. The minimum expected count is 4.33.

Independent variables related to educational goals are outlined in Tables 11-15 and were not found to be statistically significant. The Chi Square test for Table 11a, Obtain an Associate Degree, indicates there was not a significant difference (Chi Sq = 0.034; p-value= 0.983) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

Table 12a, Change Careers, also indicates there was not a significant difference (Chi Sq = 2.190; p-value= 0.335) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

As shown in Table 13a, Obtain or Update Job Related Skills, there was not a significant difference (Chi Sq = .321; p-value= 0.850) when Alpha is equal to 0.10. Since

the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

Table 14a, Self-improvement/Personal Enjoyment, indicates no significant difference (Chi Sq = 1.125; p-value= 0.570) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

Finally 15a, the Chi Square test for Transfer to a 4-Year College or University shows no statistical significance (Chi Sq = .733; p-value= 0.693) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

Educational goals have direct and indirect effects on a student's decision to persist (Bean & Metzner, 1985). Based on empirical studies, Bean and Metzner (1985) assert that a student's pre-enrollment goal to obtain a degree can affect persistence and provide motivation to complete a degree. Conversely, a student may have a short-term, non-degree goal, which can result in a higher rate of attrition (Bean & Metzner, 1985). Tables 11-13 present the percentages of responses by educational goal. As a result of the research, it would be expected that obtaining a degree as a primary goal would increase persistence. On the contrary, taking classes without the goal of obtaining a degree would result in a decrease in persistence. When comparing the statistical summaries regarding primary goals in Table 11-Table 15, the majority of respondents, 71.2%, indicates that that their primary goal is to obtain an associate's degree. There was no statistical significance found and no relationship between a desire to achieve an associate's degree and persistence. In those areas where an academic degree from the college was not a

primary goal, there was also no impact on persistence. Response rates for "Change careers" and "obtain job-related skills" was 49% and 47.1% respectively. In addition, 43.8% of respondents indicate that their primary goal at the institution is for self-improvement and/or personal enjoyment reasons. Finally, only 20.9% indicates that transferring to a 4-year university is a primary goal. See Table 15. Educational goals were not found to be a determinant.

Table 11.

Frequency of Obtain an Associate Degree

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not a goal	17	11.1	11.1	11.1
	Secondary goal	27	17.6	17.6	28.8
	Primary goal	109	71.2	71.2	100.0
	Total	153	100.0	100.0	

Table 11a.

Chi Square Obtain an Associate Degree

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.034[a]	2	.983
Likelihood Ratio	.034	2	.983
Linear-by-Linear Association	.028	1	.867
N of Valid Cases	153		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.67.

Table 12.

Frequency of Change Careers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not a goal	48	31.4	31.4	31.4
	Secondary goal	30	19.6	19.6	51.0
	Primary goal	75	49.0	49.0	100.0
	Total	153	100.0	100.0	

Table 12a.

Chi Square Change Careers

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.190[a]	2	.335
Likelihood Ratio	2.254	2	.324
Linear-by-Linear Association	1.853	1	.173
N of Valid Cases	153		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.00.

Table 13.

Frequency of Obtain or Update Job-Related Skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not a goal	37	24.2	24.3	24.3
	Secondary goal	43	28.1	28.3	52.6
	Primary goal	72	47.1	47.4	100.0
	Total	152	99.3	100.0	
Missing	System	1	.7		
Total		153	100.0		

Table 13a.

Chi Square Obtain or Update Job-Related Skills

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.321[a]	2	.852
Likelihood Ratio	.325	2	.850
Linear-by-Linear Association	.225	1	.635
N of Valid Cases	152		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 12.41.

Table 14.

Frequency of Self-improvement/Personal Enjoyment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not a goal	35	22.9	23.0	23.0
	Secondary goal	50	32.7	32.9	55.9
	Primary goal	67	43.8	44.1	100.0
	Total	152	99.3	100.0	
Missing	System	1	.7		
Total		153	100.0		

Table 14a.

Chi Square Self-improvement/Personal Enjoyment

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.125[a]	2	.570
Likelihood Ratio	1.139	2	.566
Linear-by-Linear Association	.240	1	.625
N of Valid Cases	152		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 11.74.

Table 15.

Frequency of Transfer to a 4-Year College or University

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not a goal	86	56.2	56.2	56.2
	Secondary goal	35	22.9	22.9	79.1
	Primary goal	32	20.9	20.9	100.0
	Total	153	100.0	100.0	

Table 15a.

Chi Square Transfer to a 4-Year College or University

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.733[a]	2	.693
Likelihood Ratio	.741	2	.690
Linear-by-Linear Association	.723	1	.395
N of Valid Cases	153		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.67.

Bean and Metzner (1985) include gender in their Nontraditional Undergraduate Student Attrition Model, as they indicate that men and women still have conventional roles outside the campus community which can affect their decision to persist. Bean and Metzner (1985) assert gender has indirect effects on attrition, for example, family obligations will have a positive effect for women. In reviewing Bean and Metzner's (1985) theory, it would be expected that females would persist at lower rates than men. However, this study did not support that assertion. Table 16 explores gender and reveals the majority of respondents, 86.3%, are female, but there was no statistical significance between gender and persistence.

The Chi Square test for gender, Table 16a, indicates no significant difference (Chi Sq = 0.994; p-value= 0.319) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

Table 16.

Frequency of Your Sex

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	21	13.7	13.7	13.7
	Female	132	86.3	86.3	100.0
	Total	153	100.0	100.0	

Table 16a.

Chi Square Your Sex

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.994[a]	1	.319		
Continuity Correction[b]	.559	1	.455		
Likelihood Ratio	1.044	1	.307		
Fisher's Exact Test				.455	.231
Linear-by-Linear Association	.987	1	.320		
N of Valid Cases	153				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.00.

b. Computed only for a 2x2 table

Intent to leave persistence factor. Bean and Metzner (1985) indicate that the Intent to Leave persistence factor is composed of psychological outcomes and academic variables. The descriptive statistics for the Intent to Leave persistence factor are provided in Table 17-Table 39. Chi Squares are also provided. There were no significant differences when Alpha is equal to 0.10 for any of the items in this persistence factor cluster.

Psychological outcome consists of: utility, as defined by personal development or usefulness for employment opportunities; satisfaction with educational experience; commitment to goal completion; and stress of attending (Bean & Metzner, 1985). Utility, satisfaction with the educational experience, and commitment to goal completion increase persistence, while stress of attending decreases persistence (Bean & Metzner, 1985). Tables 17-24, provide items correlating to Bean and Metzner's theory (1985) regarding the utility and practicality of getting a degree.

Table 17-Table 21 correlate to the personal development component of utilitarian reasons for attending college. Specifically, they address the utility of obtaining a degree through personal development as an outcome of Bean and Metzner's (1985) Intent to Leave persistence factor. Bean and Metzner's (1985) research indicates that higher levels of personal development is a factor that influences students decision to persist. Table 17a, Chi Square Working Effectively with Others, indicates no significant difference (Chi Sq = 0.046; p-value= 0.997) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

The Chi Square test for Table 18a, Learning Effectively On Your Own, indicates no significant difference (Chi Sq = 3.258; p-value= 0.354) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject). In addition, the Chi Square test for Table 19a, Understanding Yourself, indicates no significant difference (Chi Sq = 1.205; p-value= 0.752) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject). Table 20a, Understanding People of Other Racial and Ethnic Backgrounds, indicates no significant difference (Chi Sq = 2.041; p-value= 0.564) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject). Finally, in Table 21a, the Chi Square test for Developing a Personal Code of Values and Ethics indicates no statistical difference (Chi Sq = 0.480; p-value= 0.923) when Alpha is equal to 0.10. Since the observed significance level is less than 0.10, the null hypothesis is accepted (failed to reject).

A review of the summary statistics provides additional data. Bean and Metzner (1985) indicated in their research that education has intrinsic awards and may influence

attendance for some older students. Tables 17-21 provide data related to personal development of a student while at college. In Table 17, 89.5% believe they have worked effectively with others at least some of the time. In Table 18, 67.9% of respondents indicate they have learned to work effectively on their own. Table 19 indicates a relatively uniform distribution of respondents believe that college has contributed to understanding themselves either some, quite a bit, or very much. The item receiving the highest response in the "very little" category, 29.4%, is in the area of racial and ethnic diversity, indicating that the college experience contributed minimally in this area. See Table 20. The final personal development area relates to developing a personal code of ethics, as shown in Table 21. A normal distribution is seen with 16.3% of students indicating that the college has contributed "very much" to them developing a personal code of values and ethics and 22.9% indicating a "very little" response. It could be expected that personal development would influence continued attendance based on Bean and Metzner's (1985) research, though no variables related to personal development were found to be statistically significant.

Table 17.

Frequency of Working Effectively With Others

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very little	7	4.6	4.9	4.9
	Some	40	26.1	27.8	32.6
	Quite a bit	59	38.6	41.0	73.6
	Very much	38	24.8	26.4	100.0
	Total	144	94.1	100.0	
Missing	System	9	5.9		
Total		153	100.0		

Table 17a.

Chi Square Working Effectively With Others

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.046[a]	3	.997
Likelihood Ratio	.047	3	.997
Linear-by-Linear Association	.001	1	.981
N of Valid Cases	144		

a. 2 cells (25.0%) have expected count less than 5. The minimum expected count is 2.24.

Table 18.

Frequency of Learning Effectively On Your Own

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very little	6	3.9	4.2	4.2
	Some	34	22.2	23.6	27.8
	Quite a bit	49	32.0	34.0	61.8
	Very much	55	35.9	38.2	100.0
	Total	144	94.1	100.0	
Missing	System	9	5.9		
Total		153	100.0		

Table 18a.

Chi Square Learning Effectively On Your Own

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.258[a]	3	.354
Likelihood Ratio	3.359	3	.340
Linear-by-Linear Association	.397	1	.529
N of Valid Cases	144		

a. 2 cells (25.0%) have expected count less than 5. The minimum expected count is 1.92.

Table 19.

Frequency of Understanding Yourself

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very little	27	17.6	18.8	18.8
	Some	41	26.8	28.5	47.2
	Quite a bit	42	27.5	29.2	76.4
	Very much	34	22.2	23.6	100.0
	Total	144	94.1	100.0	
Missing	System	9	5.9		
Total		153	100.0		

Table 19a.

Chi Square Understanding Yourself

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.205[a]	3	.752
Likelihood Ratio	1.191	3	.755
Linear-by-Linear Association	1.081	1	.298
N of Valid Cases	144		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.44.

Table 20.

Frequency of Understanding People of Other Racial and Ethnic Backgrounds

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very little	45	29.4	31.0	31.0
	Some	52	34.0	35.9	66.9
	Quite a bit	28	18.3	19.3	86.2
	Very much	20	13.1	13.8	100.0
	Total	145	94.8	100.0	
Missing	System	8	5.2		
Total		153	100.0		

Table 20a.

Chi Square Understanding People of Other Racial and Ethnic Backgrounds

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.041[a]	3	.564
Likelihood Ratio	2.041	3	.564
Linear-by-Linear Association	.003	1	.959
N of Valid Cases	145		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.34.

Table 21.

Frequency of Developing a Personal Code of Values and Ethics

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very little	35	22.9	24.1	24.1
	Some	45	29.4	31.0	55.2
	Quite a bit	40	26.1	27.6	82.8
	Very much	25	16.3	17.2	100.0
	Total	145	94.8	100.0	
Missing	System	8	5.2		
Total		153	100.0		

Table 21a.

Chi Square Developing a Personal Code of Values and Ethics

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.480[a]	3	.923
Likelihood Ratio	.479	3	.924
Linear-by-Linear Association	.194	1	.660
N of Valid Cases	145		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.93.

Tables 22a-24a provide Chi Square analyses for utilitarian reasons for attending college, as it relates to employment opportunities. In Table 22a, Acquiring a Job or

Work-Related Knowledge and Skills, there is no significant difference (Chi Sq = .933; p-value= 0.818) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

Table 23a, Developing Clearer Career Goals, also demonstrates no significant difference (Chi Sq = 1.261; p-value= 0.738) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

Table 24a, Gaining Information About Career Opportunities, indicates no significant difference (Chi Sq = 1.883; p-value= 0.597) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

A review of statistical summaries in Tables 22-Table 24 explore additional data. These items address the utility of obtaining a degree through employment opportunities as an outcome of Bean and Metzner's (1985) Intent to Leave persistence factors. Bean and Metzner (1985) indicate that the "perceived value of a college education for future employment" is a powerful predictor of persistence and is negatively associated with attrition (p. 522). It would be expected in this study that those indicating a high degree of usefulness as it relates to employment would have a higher rate of persistence. Chi Square tests revealed no statistical difference. Table 22 presents a logmodal distribution, with 39.2% of students indicating that the college experience helped them "very much" in obtaining a job or work-related knowledge/skills. The percentages decrease in approximately 10% intervals as the scale moves from "quite a bit," to "some," and to "very little." Table 23 presents that the majority of students, 86.2% believe the college

has helped them "some" to "very much" in their ability to develop clear career goals. In Table 24, roughly the same amount, 83% believe that the college has helped them "some" to "very much" in gaining information about career opportunities.

Table 22.

Frequency of Acquiring a Job or Work-Related Knowledge and Skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very little	12	7.8	8.3	8.3
	Some	29	19.0	20.0	28.3
	Quite a bit	44	28.8	30.3	58.6
	Very much	60	39.2	41.4	100.0
	Total	145	94.8	100.0	
Missing	System	8	5.2		
Total		153	100.0		

Table 22a.

Chi Square Acquiring a Job or Work-Related Knowledge and Skills

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.933[a]	3	.818
Likelihood Ratio	.928	3	.819
Linear-by-Linear Association	.165	1	.684
N of Valid Cases	145		

a. 1 cells (12.5%) have expected count less than 5. The minimum expected count is 3.81.

Table 23.

Frequency of Developing Clearer Career Goals

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very little	12	7.8	8.3	8.3
	Some	37	24.2	25.7	34.0
	Quite a bit	55	35.9	38.2	72.2
	Very much	40	26.1	27.8	100.0
	Total	144	94.1	100.0	
Missing	System	9	5.9		
Total		153	100.0		

Table 23a.

Chi Square Developing Clearer Career Goals

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.261[a]	3	.738
Likelihood Ratio	1.270	3	.736
Linear-by-Linear Association	1.221	1	.269
N of Valid Cases	144		

a. 1 cells (12.5%) have expected count less than 5. The minimum expected count is 3.83.

Table 24.

Frequency of Gaining Information About Career Opportunities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very little	18	11.8	12.4	12.4
	Some	41	26.8	28.3	40.7
	Quite a bit	46	30.1	31.7	72.4
	Very much	40	26.1	27.6	100.0
	Total	145	94.8	100.0	
Missing	System	8	5.2		
Total		153	100.0		

Table 24a.

Chi Square of Gaining Information About Career Opportunities

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.883[a]	3	.597
Likelihood Ratio	1.851	3	.604
Linear-by-Linear Association	1.450	1	.229
N of Valid Cases	145		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.71.

In reviewing student satisfaction, a Chi Square test demonstrates no statistical significance, as illustrated in Table 25a, How Would You Evaluate Your Entire Educational Experience At This College, (Chi Sq = 1.335; p-value= 0.721) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

Bean and Metzner (1985) indicated that a nontraditional student's satisfaction influences attrition and results in an inverse relationship between satisfaction and attrition. It would be expected that higher levels of satisfaction result in higher rates of persistence. Table 25 presents the students evaluation of their educational experience at the college. A majority of respondents, 91.5%, have a "good" to "excellent" evaluation of their experience. However, there was no statistical significance related to the rating of their experience and persistence.

Table 25.

Frequency of How Would You Evaluate Your Entire Educational Experience At This College

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Poor	1	.7	.7	.7
	Fair	12	7.8	7.8	8.5
	Good	88	57.5	57.5	66.0
	Excellent	52	34.0	34.0	100.0
	Total	153	100.0	100.0	

Table 25a.

Chi Square How Would You Evaluate Your Entire Educational Experience At This College

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.335[a]	3	.721
Likelihood Ratio	1.652	3	.648
Linear-by-Linear Association	.212	1	.645
N of Valid Cases	153		

a. 3 cells (37.5%) have expected count less than 5. The minimum expected count is .33.

Tables 26a and 27a examine Chi Square tests for a student's level of commitment toward their academic goals. Chi Square Test results for Table 26a, "Worked Harder Than You Thought You Could To Meet An Instructor's Standards or Expectations," revealed no statistical significance (Chi Sq = 0.117; p-value= 0.990) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

Table 27a, When Do You Plan To Take Classes At This College Again, also indicated no significant difference (Chi Sq = 2.072; p-value= 0.558) when Alpha is equal

to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

Bean and Metzner (1985) indicated that their research demonstrates a positive correlation between academic goal commitments and persistence. It would be expected that higher persistence rates would result from stronger academic goals and commitments. Table 26 presents students' opinions regarding how often they worked harder than they thought they could to meet standards or expectations. The majority of respondents, 96.1%, indicated at least a minimal response of "sometimes." 60.2% indicated they worked harder "often" or "very often." Table 27 indicates students' future plans for taking classes at the college. A logmodal distribution is revealed, with a peak percentage, 62.7%, of respondents who have a desire to take classes within the next 12 months. 18.3% of respondents have no plans to return or are uncertain. There was no statistical significance that could be determined from the independent variables in this section and Bean and Metzner's (1985) assertions could not be supported.

Table 26.

Frequency of Worked Harder Than You Thought You Could To Meet An Instructor's Standards or Expectations

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	6	3.9	4.0	4.0
	Sometimes	53	34.6	35.1	39.1
	Often	57	37.3	37.7	76.8
	Very often	35	22.9	23.2	100.0
	Total	151	98.7	100.0	
Missing	System	2	1.3		
Total		153	100.0		

Table 26a.

Chi Square Worked Harder Than You Thought You Could To Meet An Instructor's Standards or Expectations

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.117[a]	3	.990
Likelihood Ratio	.117	3	.990
Linear-by-Linear Association	.054	1	.817
N of Valid Cases	151		

a. 2 cells (25.0%) have expected count less than 5. The minimum expected count is 2.03.

Table 27.

Frequency of When Do You Plan To Take Classes At This College Again

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I will accomplish my goal(s) this term and will not be returning	28	18.3	18.4	18.4
	I have no current plans to return	4	2.6	2.6	21.1
	Within the next 12 months	96	62.7	63.2	84.2
	Uncertain	24	15.7	15.8	100.0
	Total	152	99.3	100.0	
Missing	System	1	.7		
Total		153	100.0		

Table 27a.

Chi Square When Do You Plan To Take Classes At This College Again

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.072[a]	3	.558
Likelihood Ratio	3.301	3	.347
Linear-by-Linear Association	.001	1	.977
N of Valid Cases	152		

a. 2 cells (25.0%) have expected count less than 5. The minimum expected count is 1.32.

Tables 28-30 examine the stress of attending college. Table 28a, "Providing the Support You Need To Thrive Socially," indicates no significant difference (Chi Sq = 0.792; p-value= 0.851) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

Table 29a, "Helping You Cope With Your Non-academic Responsibilities," also indicates no significant difference (Chi Sq = 2.771; p-value= 0.428) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

Chi Square analysis also reveals no statistical significance in Table 30a, "Providing the Support You need to Thrive Socially," (Chi Sq = 1.174; p-value= 0.759) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

In the Nontraditional Undergraduate Student Attrition Model, Bean and Metzner (1985) indicate that stress created by factors associated with both college attendance or unassociated with college will impact attrition. From Bean and Metzner's (1985) research, it would be anticipated that support to deal with stress would result in an increase in persistence. Statistical summary analysis data provided in Tables 28-30 does not support that finding and results are not statistically significant. Table 28 presents students responses regarding the college's ability to provide the support they need to thrive socially. 30.7% indicate "very little" support has been provided. Table 29 reveals student responses regarding how the college has helped them cope with non-academic responsibilities. Similar to results from Table 28, 34.6% indicate a "very little" response. Contrary to the previous responses regarding support to thrive socially and cope with

non-academic responsibilities, 98% of students reveal at least “some” to “very much” support is provided by the college to help them succeed. See Table 30.

Table 28.

Frequency of Providing the Support You Need To Thrive Socially

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very little	47	30.7	32.0	32.0
	Some	60	39.2	40.8	72.8
	Quite a bit	27	17.6	18.4	91.2
	Very much	13	8.5	8.8	100.0
	Total	147	96.1	100.0	
Missing	System	6	3.9		
Total		153	100.0		

Table 28a.

Chi Square Providing the Support You Need To Thrive Socially

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.792[a]	3	.851
Likelihood Ratio	.792	3	.851
Linear-by-Linear Association	.684	1	.408
N of Valid Cases	147		

a. 2 cells (25.0%) have expected count less than 5. The minimum expected count is .96.

Table 29.

Frequency of Helping You Cope With Your Non-academic Responsibilities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very little	53	34.6	36.1	36.1
	Some	72	47.1	49.0	85.0
	Quite a bit	15	9.8	10.2	95.2
	Very much	7	4.6	4.8	100.0
	Total	147	96.1	100.0	
Missing	System	6	3.9		
Total		153	100.0		

Table 29a.

Chi Square Helping You Cope With Your Non-Academic Responsibilities

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.771[a]	3	.428
Likelihood Ratio	2.924	3	.404
Linear-by-Linear Association	.139	1	.709
N of Valid Cases	147		

a. 3 cells (37.5%) have expected count less than 5. The minimum expected count is 2.24.

Table 30.

Frequency of Providing the Support You Need To Help You Succeed at This College

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very little	3	2.0	2.0	2.0
	Some	24	15.7	16.3	18.4
	Quite a bit	63	41.2	42.9	61.2
	Very much	57	37.3	38.8	100.0
	Total	147	96.1	100.0	
Missing	System	6	3.9		
Total		153	100.0		

Table 30a.

Chi Square Providing the Support You Need To Help You Succeed at This College

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.174[a]	3	.759
Likelihood Ratio	1.138	3	.768
Linear-by-Linear Association	.345	1	.557
N of Valid Cases	147		

a. 1 cells (12.5%) have expected count less than 5. The minimum expected count is 4.16.

As mentioned previously, Bean and Metzner (1985) indicate that the Intent to Leave persistence factor is composed of psychological outcomes and academic variables.

Academic variables consist of: study skills and habits, academic advising, absenteeism, major uncertainty, and course availability (Bean & Metzner, 1985). It is expected that academic variables have an indirect effect on persistence as a gauge of academic integration (Bean & Metzner, 1985; Tinto, 1975). Items that correlated to major uncertainty and course availability were not considered due to a lack of correlation with items on the CCSSE, however, correlations relating to study skills, academic advising, and absenteeism could be made. Tables 31-36, provide items correlating to Bean and Metzner's theory (1985) regarding study skills.

There were no variables that were statistically significant in the study skills section. Table 31a, "Prepared Two Or More Drafts Of A Paper or Assignment Before Turning It In," indicates no significant difference (Chi Sq = 2.912; p-value= 0.405) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

Table 32a, "Come To Class Without Completing Readings Or Assignments," indicates no significant difference (Chi Sq = 1.139; p-value= 0.768) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

Chi Square analysis also reveals no statistical significance in Table 33a, "Worked With Classmates Outside of Class To Prepare Class Assignments," (Chi Sq = 4.758; p-value= 0.190) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

Table 34a, "Number of Assigned Textbooks, Manuals, Books or Booklength Packs of Course Readings," indicates no significant difference (Chi Sq = 2.166; p-value=

0.539) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

Table 35a, "Number of Written Papers or Reports of Any Length," indicates no significant difference (Chi Sq = 0.780; p-value= 0.941) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

Finally, Table 36a, "Preparing For Class," indicates no significant difference (Chi Sq = 2.123; p-value= 0.713) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

Statistical summaries are provided for study skills variables. Bean and Metzner's (1985) research indicates that academic variables are an indicator of academic integration. From Bean and Metzner's (1985) model, it would be anticipated that study skills would have an effect on persistence. However, there were no independent variables the provided to be statistically significant. Table 31 provides the frequency of student responses regarding how often they prepared two or more drafts of a paper or assignment before turning it in. 89.5% of students reported that at least "sometimes" they exhibited the behavior. Table 32 demonstrates the percentage of students that came to class without completing readings or assignments. 1.3% indicated a "very often" response. 43.1% indicated that they never exhibit this behavior. Table 33 reveals the percentage of students worked with classmates outside of class. 63.4% of students indicate that they exhibited this behavior "never" or "sometimes." Table 34 demonstrates the number of assigned textbooks, manuals, books, or book-length packs of course readings they have read. The majority of respondents, 66.7% indicate they have read between one and ten.

Table 35 explores the number of papers or reports students have written. In strong similarity to Table 34, 66% of students indicate that they have written between one and ten papers or reports. Finally, Table 36 reports on the number of hours students have spent preparing for class. There is a unimodal distribution, with the peak occurring between 11-20 hours of time spent preparing for class at a 31.4% response level.

Table 31.

Frequency of Prepared Two Or More Drafts Of A Paper Or Assignment Before Turning It In

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	16	10.5	10.7	10.7
	Sometimes	48	31.4	32.0	42.7
	Often	45	29.4	30.0	72.7
	Very often	41	26.8	27.3	100.0
	Total	150	98.0	100.0	
Missing	System	3	2.0		
Total		153	100.0		

Table 31a.

Chi Square Prepared Two Or More Drafts Of A Paper Or Assignment Before Turning It In

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.912[a]	3	.405
Likelihood Ratio	2.920	3	.404
Linear-by-Linear Association	.031	1	.860
N of Valid Cases	150		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.33.

Table 32.

Frequency of Come To Class Without Completing Readings Or Assignments

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	66	43.1	43.4	43.4
	Sometimes	77	50.3	50.7	94.1
	Often	7	4.6	4.6	98.7
	Very often	2	1.3	1.3	100.0
	Total	152	99.3	100.0	
Missing	System	1	.7		
Total		153	100.0		

Table 32a.

Chi Square Come To Class Without Completing Readings Or Assignments

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.139[a]	3	.768
Likelihood Ratio	1.766	3	.622
Linear-by-Linear Association	.473	1	.492
N of Valid Cases	152		

a. 4 cells (50.0%) have expected count less than 5. The minimum expected count is .67.

Table 33.

Frequency of Worked With Classmates Outside Of Class To Prepare Class Assignments

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	32	20.9	21.2	21.2
	Sometimes	65	42.5	43.0	64.2
	Often	37	24.2	24.5	88.7
	Very often	17	11.1	11.3	100.0
	Total	151	98.7	100.0	
Missing	System	2	1.3		
Total		153	100.0		

Table 33a

Chi Square Worked With Classmates Outside Of Class To Prepare Class Assignments

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.758[a]	3	.190
Likelihood Ratio	4.927	3	.177
Linear-by-Linear Association	1.333	1	.248
N of Valid Cases	151		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.74.

Table 34.

Frequency of Number Of Assigned Textbooks, Manuals, Books, or Booklength Packs of Course Readings

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Between 1 and 4	41	26.8	28.1	28.1
	Between 5 and 10	61	39.9	41.8	69.9
	Between 11 and 20	26	17.0	17.8	87.7
	More than 20	18	11.8	12.3	100.0
	Total	146	95.4	100.0	
Missing	System	7	4.6		
Total		153	100.0		

Table 34a.

Chi Square Number of Assigned Textbooks, Manuals, Books, or Booklength Packs of Course Readings

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.166[a]	3	.539
Likelihood Ratio	2.189	3	.534
Linear-by-Linear Association	.443	1	.506
N of Valid Cases	146		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.67.

Table 35.

Frequency of Number of Written Papers or Reports of Any Length

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None	3	2.0	2.0	2.0
	Between 1 and 4	45	29.4	30.6	32.7
	Between 5 and 10	56	36.6	38.1	70.7
	Between 11 and 20	23	15.0	15.6	86.4
	More than 20	20	13.1	13.6	100.0
	Total	147	96.1	100.0	
Missing	System	6	3.9		
Total		153	100.0		

Table 35a

Chi Square Number of Written Papers or Reports of Any Length

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.780[a]	4	.941
Likelihood Ratio	.788	4	.940
Linear-by-Linear Association	.097	1	.756
N of Valid Cases	147		

a. 2 cells (20.0%) have expected count less than 5. The minimum expected count is .96.

Table 36.

Frequency of Preparing for Class

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-5 hours	24	15.7	16.3	16.3
	6-10 hours	38	24.8	25.9	42.2
	11-20 hours	48	31.4	32.7	74.8
	21-30 hours	26	17.0	17.7	92.5
	More than 30 hours	11	7.2	7.5	100.0
	Total	147	96.1	100.0	
Missing	System	6	3.9		
Total		153	100.0		

Table 36a.

Chi Square Preparing for Class

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.123[a]	4	.713
Likelihood Ratio	2.149	4	.708
Linear-by-Linear Association	.081	1	.777
N of Valid Cases	147		

a. 1 cells (10.0%) have expected count less than 5. The minimum expected count is 3.52.

The Chi Square test provided in this section provides information related to satisfaction with academic advising and indicate no statistical significance. Table 37a, Satisfaction: Academic Advising/Planning, indicates no significant difference (Chi Sq = 0.903; p-value= 0.825) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

Bean and Metzner (1985) highlight research indicating that the quality of academic advising that a student receives is a factor that influences a student's decision to withdraw from college. As a result, it would be anticipated that high satisfaction rates with advising would result in an increase in persistence. However, the positive relationship between satisfaction and persistence could not be supported by this research. Statistical summary analysis provides additional data. Table 37 demonstrates the student's satisfaction levels with academic advising/planning. 79.7% indicate a "somewhat" or "very" satisfied level. 7.2% indicate they are "not at all" satisfied and 12.4% indicate an "n.a." response.

Table 37.

Frequency of Satisfaction: Academic Advising/Planning

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	N.A.	19	12.4	12.5	12.5
	Not at all	11	7.2	7.2	19.7
	Somewhat	55	35.9	36.2	55.9
	Very	67	43.8	44.1	100.0
	Total	152	99.3	100.0	
Missing	System	1	.7		
Total		153	100.0		

Table 37a.

Chi Square Satisfaction: Academic Advising/Planning

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.903[a]	3	.825
Likelihood Ratio	.901	3	.825
Linear-by-Linear Association	.000	1	.995
N of Valid Cases	152		

a. 1 cells (12.5%) have expected count less than 5. The minimum expected count is 3.69.

In reviewing the Chi Square test for absenteeism, it reveals no statistical significance for the CCSSE items under this variable. Table 38a, Skipped Class, indicates no significant difference (Chi Sq = 0.600; p-value= 0.741) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

Absenteeism "is an indicator of students' reduced interaction with their college" (Bean & Metzner, 1985, p. 501). It would be anticipated that high absenteeism would correlate to decreased college integration and have a positive correlation with attrition. The anticipated result was not found in this research. Table 39 provides a statistical summary pertaining to the frequency of how often students' skipped class. A logmodal

distribution is seen, with 78.4% of students reported that they "never" skip class. 20.9% skip class "sometimes" and .7% indicate they skip class often.

Table 38.

Frequency of Skipped Class

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	120	78.4	78.4	78.4
	Sometimes	32	20.9	20.9	99.3
	Often	1	.7	.7	100.0
	Total	153	100.0	100.0	

Table 38a.

Chi Square Frequency of Skipped Class

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.600[a]	2	.741
Likelihood Ratio	.911	2	.634
Linear-by-Linear Association	.279	1	.597
N of Valid Cases	153		

a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is .33.

Environmental persistence factor. Bean and Metzner (1985) indicate that the Environmental persistence factor is composed of a perceived or real lack of finances, working for long hours, lacking encouragement, family responsibilities, and a perceived opportunity to transfer. The descriptive statistics for the Environmental persistence factor are provided in Table 39-Table 49. There were three items that were statistically significant and will be discussed in the Chi Square Test Analysis. They include: How Supportive Are Your Friends of Your Attending This College, Satisfaction: Transfer Credit Assistance, and Transfer to a 4-year College or University. The following items provided in the descriptive statistics summary are items that were not found to be

statistically significant; however, they do provide information to the institution under study.

In reviewing items related to lack of finances, Tables 39a and 39b indicate no statistical significance. Table 39a, "Providing the Financial Support You Need to Afford Your Education," indicates no significant difference (Chi Sq = 3.384; p-value= 0.336) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

Table 40a, "Lack of Finances," also indicates no significant difference (Chi Sq = 2.017; p-value= 0.569) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

Bean and Metzner (1985) affirm that through research, a positive correlation has been demonstrated between financial difficulty and attrition. This result was not duplicated in this study. Statistical summary results are provided regarding finances. Table 39 provides data related to how much the college emphasizes the financial support needed to afford a student's education. 81.1% of students believe that the college emphasizes financial support either "quite a bit" or "very much." Table 40 provides data related to how likely the lack of finances might cause a student to withdraw. One-third of students, 33.3%, indicate that it would is "very likely" they would withdraw if they did not have adequate finances. An additional half, 50.9%, of students believe they would be "somewhat likely" or "likely" to withdraw due to lack of finances.

Table 39.

Frequency of Providing the Financial Support You Need to Afford Your Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very little	23	15.0	15.6	15.6
	Some	37	24.2	25.2	40.8
	Quite a bit	44	28.8	29.9	70.7
	Very much	43	28.1	29.3	100.0
	Total	147	96.1	100.0	
Missing	System	6	3.9		
Total		153	100.0		

Table 39a.

Chi Square Providing the Financial Support You Need to Afford Your Education

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.384[a]	3	.336
Likelihood Ratio	3.363	3	.339
Linear-by-Linear Association	.001	1	.972
N of Valid Cases	147		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.35.

Table 40.

Frequency of Lack of Finances

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not likely	24	15.7	15.7	15.7
	Somewhat likely	38	24.8	24.8	40.5
	Likely	40	26.1	26.1	66.7
	Very likely	51	33.3	33.3	100.0
	Total	153	100.0	100.0	

Table 40a.

Chi Square Lack of Finances

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.017[a]	3	.569
Likelihood Ratio	1.990	3	.574
Linear-by-Linear Association	.474	1	.491
N of Valid Cases	153		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.00.

Bean and Metzner (1985) noted that empirical studies demonstrate a relationship between the number of hours per week student's work and their persistence in college. Studies demonstrate that students who were employed fewer than 20 hours per week have a positive correlation on persistence and students employed beyond 20 hours exhibit a negative relationship on persistence (Astin, 1975). It would be expected that students who work excessive hours would have lower rates of persistence. However, no significant difference was observed between persisters and nonpersisters. Table 41 reveals how many hours in a week a student works for pay. A bimodal distribution is demonstrated, with 25.5% of students indicating they work more than 30 hours. In addition, 31.4% indicated they work "none." Data also demonstrates that 37.3% of students indicated that they work more than 20 hours per week and 58.8% indicate they work less than 20 hours per week. Finally, Table 42 points out 37.3% believe it would be "not likely" that working full-time would cause them to withdraw. Conversely, 37.3% respondents indicate that working full-time would "likely" or "very likely" be the reason for their withdrawal.

In reviewing hours of employment, Chi Square test in Table 41a, "Working for Pay," indicates no significant difference (Chi Sq = 0.1.881; p-value= 0.865) when Alpha

is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

Table 42a, "Working Full-Time," also indicates no significant difference (Chi Sq = 0.923; p-value= 0.820) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

Table 41.

Frequency of Working for Pay

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None	48	31.4	32.7	32.7
	1-5 hours	6	3.9	4.1	36.7
	6-10 hours	11	7.2	7.5	44.2
	11-20 hours	25	16.3	17.0	61.2
	21-30 hours	18	11.8	12.2	73.5
	More than 30 hours	39	25.5	26.5	100.0
	Total	147	96.1	100.0	
Missing	System	6	3.9		
Total		153	100.0		

Table 41a

Chi Square Working for Pay

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.881[a]	5	.865
Likelihood Ratio	1.826	5	.873
Linear-by-Linear Association	.040	1	.842
N of Valid Cases	147		

a. 3 cells (25.0%) have expected count less than 5. The minimum expected count is 1.92.

Table 42.

Frequency of Working Full-Time

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not likely	57	37.3	37.3	37.3
	Somewhat likely	39	25.5	25.5	62.7
	Likely	18	11.8	11.8	74.5
	Very likely	39	25.5	25.5	100.0
	Total	153	100.0	100.0	

Table 42a.

Chi Square Working Full-Time

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.923[a]	3	.820
Likelihood Ratio	.926	3	.819
Linear-by-Linear Association	.324	1	.569
N of Valid Cases	153		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.00.

Outside encouragement for students is measured by the level of encouragement a student receives to stay in college by someone in the student's life who is not employed by the college (Bean & Metzner, 1985). Table 43a, "How Supportive Is Your Immediate Family of Your Attending This College," indicates no significant difference (Chi Sq = .718; p-value= 0.869) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject). One independent variable addressing support provided by friends was found to be statistically significant and will be discussed in the Chi Square Test Analysis.

Bean and Metzner (1985) noted that there is a positive correlation between outside support from family and friends and persistence. It is anticipated that students reporting high levels of support would have higher persistence rates. There was no

significant difference found between those that persist and those that did not persist when asked about the level of support from families. Table 43 reveals the level of support students believe they have from their immediate family. Three-fourths of students, 75.2%, believe their family members are "extremely" supportive. A significant difference was found when exploring friend support and will be discussed in the Chi Square Analysis section.

Table 43.

Frequency of How Supportive is Your Immediate Family of Your Attending This College

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not very	1	.7	.7	.7
	Somewhat	11	7.2	7.2	7.8
	Quite a bit	26	17.0	17.0	24.8
	Extremely	115	75.2	75.2	100.0
	Total	153	100.0	100.0	

Table 43a.

Chi Square How Supportive is Your Immediate Family of Your Attending This College

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.718[a]	3	.869
Likelihood Ratio	1.036	3	.793
Linear-by-Linear Association	.288	1	.591
N of Valid Cases	153		

a. 3 cells (37.5%) have expected count less than 5. The minimum expected count is .33.

There were no statistically significant variables found in CCSSE items related to family responsibilities. Table 44a, "Caring for Dependents," indicates no significant difference (Chi Sq = 3.484; p-value= 0.323) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

Table 45a, "Do You Have Children Living with You," also indicates no significant difference (Chi Sq = 0.018; p-value= 0.894) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

Table 46a, "Are You Married," indicates no significant difference (Chi Sq = 1.593; p-value= 0.207) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

Finally, Table 47a, "Providing Care for Dependents Living with You," indicates no significant difference (Chi Sq = 3.133; p-value= 0.679) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

Bean and Metzner's (1985) research illustrated that family responsibilities and pressures can decrease persistence rates and studies could anticipate a negative relationship between persistence and family responsibilities. In the statistical summary analysis, all variables related to family responsibilities demonstrated no difference between persisters and nonpersisters. Table 44 reveals how likely caring for dependents would cause a student to withdraw from class or college. 39.2% of students indicate that it would be "not likely" that caring for dependents would cause them to withdraw. Table 45 indicates the percentage of students that have children living with them. Three-fourths, 75.8%, of respondents indicate they have children living at home. In Table 46, students are asked if they are married. Approximately one-half, 54.2% indicate that they are married. Table 47 asks students how many hours they spend in a week providing care for dependents. A bimodal distribution is revealed, with 64.7% of students indicating they

spend more than 30 hours per week caring for dependents. Another 17% of students indicate the time they spend caring for dependents is "none."

Table 44.

Frequency of Caring for Dependents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not likely	60	39.2	39.2	39.2
	Somewhat likely	38	24.8	24.8	64.1
	Likely	25	16.3	16.3	80.4
	Very likely	30	19.6	19.6	100.0
	Total	153	100.0	100.0	

Table 44a.

Chi Square Caring for Dependents

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.484[a]	3	.323
Likelihood Ratio	3.679	3	.298
Linear-by-Linear Association	.002	1	.960
N of Valid Cases	153		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.33.

Table 45.

Frequency of Do You Have Children Who Live With You

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	116	75.8	75.8	75.8
	No	37	24.2	24.2	100.0
	Total	153	100.0	100.0	

Table 45a.

Chi Square Do You Have Children Who Live With You

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.018[a]	1	.894		
Continuity Correction[b]	.000	1	1.000		
Likelihood Ratio	.018	1	.894		
Fisher's Exact Test				1.000	.531
Linear-by-Linear Association	.018	1	.894		
N of Valid Cases	153				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 12.33.

b. Computed only for a 2x2 table

Table 46.

Frequency of Are You Married

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	83	54.2	54.2	54.2
	No	70	45.8	45.8	100.0
	Total	153	100.0	100.0	

Table 46a.

Chi Square Are You Married

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.593[a]	1	.207		
Continuity Correction[b]	1.188	1	.276		
Likelihood Ratio	1.591	1	.207		
Fisher's Exact Test				.231	.138
Linear-by-Linear Association	1.583	1	.208		
N of Valid Cases	153				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 23.33.

b. Computed only for a 2x2 table

Table 47.

Frequency of Providing Care for Dependents Living with You

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None	26	17.0	17.7	17.7
	1-5 hours	7	4.6	4.8	22.4
	6-10 hours	5	3.3	3.4	25.9
	11-20 hours	4	2.6	2.7	28.6
	21-30 hours	6	3.9	4.1	32.7
	More than 30 hours	99	64.7	67.3	100.0
	Total	147	96.1	100.0	
Missing	System	6	3.9		
Total		153	100.0		

Table 47a.

Chi Square Providing Care for Dependents Living with You

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.133[a]	5	.679
Likelihood Ratio	3.046	5	.693
Linear-by-Linear Association	.805	1	.369
N of Valid Cases	147		

a. 8 cells (66.7%) have expected count less than 5. The minimum expected count is 1.28.

Bean and Metzner (1985) indicated through their research that students' transferring to a four-year institution is a major factor for withdrawal. Equally, if students perceive difficulty with transferring, a negative relationship to attrition will result (Bean & Metzner, 1985). As a result, it is anticipated that students frequently using transfer credit assistance will be less likely to persist and those students attributing high importance to transfer credit assistance will also be less likely to persist. There was no statistical significance found between those students who persisted and those that did not with either independent variable. Table 48 examines how often students report using transfer credit assistance. 77.7% of respondents fall into the category of "rarely/never" or

"don't know/N.A." related to their frequency of use of transfer credit assistance. Table 49 measures the importance level students attribute to transfer credit assistance. 62.8% believe transfer credit assistance is "somewhat" or "very" important.

There were two items that were found to be statistically significant in the "opportunity to transfer" variable and will be discussed in the Chi Square Test Analysis section. Table 48a, "Frequency: Transfer Credit Assistance," indicates no significant difference (Chi Sq = 1.662; p-value= 0.646) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

Table 49a, "Importance: Transfer Credit Assistance," indicates no significant difference (Chi Sq = 1.115; p-value= 0.573) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is accepted (failed to reject).

Table 48.

Frequency of Frequency: Transfer Credit Assistance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Don't know/N.A.	64	41.8	42.1	42.1
	Rarely/never	55	35.9	36.2	78.3
	Sometimes	24	15.7	15.8	94.1
	Often	9	5.9	5.9	100.0
	Total	152	99.3	100.0	
Missing	System	1	.7		
Total		153	100.0		

Table 48a.

Chi Square Frequency: Transfer Credit Assistance

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.662[a]	3	.646
Likelihood Ratio	1.647	3	.649
Linear-by-Linear Association	.070	1	.791
N of Valid Cases	152		

a. 1 cells (12.5%) have expected count less than 5. The minimum expected count is 3.02.

Table 49.

Frequency of Importance: Transfer Credit Assistance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	50	32.7	34.2	34.2
	Somewhat	33	21.6	22.6	56.8
	Very	63	41.2	43.2	100.0
	Total	146	95.4	100.0	
Missing	System	7	4.6		
Total		153	100.0		

Table 49a.

Chi Square Importance: Transfer Credit Assistance

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.115[a]	2	.573
Likelihood Ratio	1.097	2	.578
Linear-by-Linear Association	.093	1	.761
N of Valid Cases	146		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 11.53.

Though there were only four items that were found to be statistically significant, descriptive analysis reveals important information for the institution under study. A discussion of results will be provided in Chapter Five. A Chi Square Analysis will be

provided in the next section to highlight results from variables found to be statistically significant.

Chi Square Analysis For Significant CCSSE Items

A Chi Square test was used to explore the distribution of responses to CCSSE items according to the dependent variable of persistence. For two persistence factors, Academic Outcome persistence factor and Intent to Leave persistence factor, there were no significant differences when Alpha is equal to 0.10.

Completion of a certificate as a goal. As mentioned previously, Bean and Metzner (1985) indicate that background and defining variables influences the interaction that occurs between the college and the student. A research review conducted by Bean and Metzner (1985) also noted that educational goals are motivational in nature and influence persistence. Through Bean and Metzner's (1985) research, it would be expected that having a primary goal to obtain a degree or certificate would influence persistence. Table 50 reveals students who indicate if completing a certificate is a "primary goal," "secondary goal," or "not a goal." As shown in Table 50, there was a significant difference (Chi Sq = 4.729; p-value= 0.094) when Alpha is equal to 0.10. Since the observed significance level was less than the 0.10, the null hypothesis was rejected.

When looking at the analysis, there is a bimodal distribution in responses for both students who persisted and those that did not persist. For those students who persisted, 42.2% of respondents indicated that completing a certificate was a primary goal. For those students did not persist, 46% indicate that completion of a certificate was a primary goal. However, those who persisted and indicated it was a secondary goal had a 24.5% response rate. Those who did not persist had a 10% response rate with the same answer.

In addition, another 33.3% of respondents that persisted indicated that completion of a certificate was not a goal. For those that did not persist, 44% indicated a certificate was not a goal, indicating a 10.7% difference. Bean and Metzner's (1985) research indicating that educational goals are important can be supported, as respondents who did not have completion of a certificate as a goal altogether persisted at smaller rates. Higher persistence rates also occurred if they indicated completion of a certificate as a secondary goal.

Table 50.

Chi Square Test - Complete a Certificate Program

			Persistence Status		
			Persisted	Did not persist	Total
Complete a certificate program	Not a goal	Count	34	22	56
		% within Persistence Status	33.3%	44.0%	36.8%
	Secondary goal	Count	25	5	30
		% within Persistence Status	24.5%	10.0%	19.7%
	Primary goal	Count	43	23	66
		% within Persistence Status	42.2%	46.0%	43.4%
Total		Count	102	50	152
		% within Persistence Status	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.729[a]	2	.094
Likelihood Ratio	5.150	2	.076
Linear-by-Linear Association	.194	1	.659
N of Valid Cases	152		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 9.87.

Support from friends. Bean and Metzner (1985) have noted that a student's decision to persist can be impacted by factors that the college cannot control. These factors can also be direct or indirect (Bean & Metzner, 1985). Three Environmental persistence factor items were found to have statistical differences between response rates and persistence. The first item of statistical significant related to outside encouragement and the support students reported they had from friends. As indicated previously, Bean and Metzner (1985) have found a positive correlation between the support a student has from friends and persistence. It is anticipated that high levels of support will translate to high persistence. Table 51 reveals the level of support respondents believe their friends to be of their attendance at the college. As shown in Table 51, there was a significant difference (Chi Sq = 6.933; p-value= 0.031) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is rejected.

There is a logmodal distribution in responses for both students who persisted and those that did not persist. For those students who persisted, 69.6% indicated that their friends were "extremely" supportive of attending the college. Similarly, but in contrast to Bean and Metzner's (1985) assertion, 70.6% or respondents that did not persist indicated friends that were "extremely" supportive of attending the college. The difference between

persisters and non-persisters can be seen in the "quite a bit" response and the "somewhat" response. Again, contrary to Bean and Metzner's theory, higher rates of "quite a bit" of support were seen from those who did not persist, with a 29.4% response rate, as opposed to those who persisted, with a 19.6% response rate. Persisting respondents who recorded higher levels of "somewhat" support did persist at higher rates than nonpersisters. Finally, both groups indicated a zero response rate as having any friends that were "not very" supportive of attending the college.

Table 51.

Chi Square Test – How Supportive Are Your Friends of Your Attending This College

			Persistence Status		
			Persisted	Did not persist	Total
How supportive are your friends of your attending this college	Somewhat	Count	11	0	11
		% within Persistence Status	10.8%	.0%	7.2%
	Quite a bit	Count	20	15	35
		% within Persistence Status	19.6%	29.4%	22.9%
	Extremely	Count	71	36	107
		% within Persistence Status	69.6%	70.6%	69.9%
Total		Count	102	51	153
		% within Persistence Status	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.933[a]	2	.031
Likelihood Ratio	10.298	2	.006
Linear-by-Linear Association	1.238	1	.266
N of Valid Cases	153		

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 3.67.

Satisfaction with transfer credit assistance. The second environmental variable found to be significant related to satisfaction with transfer assistance. A student's perception related to the degree of difficulty of transferring has a negative relationship with attrition (Bean, 1982; Bean & Metzner, 1985). It is anticipated that high satisfaction levels with transfer credit assistance will result in a perception of decreased difficulty and thus, a decrease in persistence. Table 52 reveals the respondents' satisfaction with the transfer credit assistance provided by the college. As shown in Table 52, there was a significant difference (Chi Sq = 7.703; p-value= 0.053) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is rejected.

13.3%, of respondents indicated a "very" satisfied response. A 5.9% "very" response rate occurred for those who did not persist. For those respondents that persisted, 5.1% indicated they were "not at all" satisfied. For those that did not persist, 17.6% had the same response of "not at all" satisfied. This data does not support Bean and Metzner's (1985) research. Finally, 62.2% of respondents who persisted indicated that their satisfaction was "n.a." Similarly for those that did not persist, 54.9% of respondents indicated a "n.a." response. However, students who are not using transfer credit

assistance are persisting at a higher rate, which does support Bean and Metzner's (1985) assertions.

Table 52.

Chi Square Test – Satisfaction: Transfer Credit Assistance

			Persistence Status		
			Persisted	Did not persist	Total
Satisfaction: Transfer credit assistance	N.A.	Count	61	28	89
		% within Persistence Status	62.2%	54.9%	59.7%
	Not at all	Count	5	9	14
		% within Persistence Status	5.1%	17.6%	9.4%
	Somewhat	Count	19	11	30
		% within Persistence Status	19.4%	21.6%	20.1%
	Very	Count	13	3	16
		% within Persistence Status	13.3%	5.9%	10.7%
Total		Count	98	51	149
		% within Persistence Status	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.703[a]	3	.053
Likelihood Ratio	7.508	3	.057
Linear-by-Linear Association	.077	1	.782
N of Valid Cases	149		

a. 1 cells (12.5%) have expected count less than 5. The minimum expected count is 4.79.

Transfer to a 4-year college as a reason for withdrawal. In continuing to explore transfer issues, the opportunity to transfer can affect student persistence and is a major reason provided by students who withdraw, particularly at community colleges (Bean & Metzner, 1985). It is anticipated that students indicating a high likelihood of withdrawing

due to transferring to a 4-year institution will result in lower persistence rates. Table 53 reveals the likelihood of withdrawing from the college based on the issue of transferring to a 4-year college or university. As shown in Table 53, there was a significant difference (Chi Sq = 7.812; p-value= 0.050) when Alpha is equal to 0.10. Since the observed significance level is less than the 0.10, the null hypothesis is rejected.

Table 53 reveals those respondents who indicated transferring was "very likely" had a persistence rate of 7.8%, while those not persisting had a higher response rate of 15.7%. This finding supports Bean and Metzner's (1985) assertion that an increase in the likelihood of transferring will result in decreased persistence. A similar finding was revealed in those who responded "somewhat likely." Of those respondents who persisted, 13.7% answered "somewhat likely." Of those that did not persist, the percentage increased to 27.5%. In addition, the majority of respondents who persisted, 62.7% reported that transferring would "not likely" be an issue that would cause them to withdraw. For those that did not persist, 47.1%, respondents indicated a "not likely" response. Bean and Metzner's (1985) assertion was supported.

Table 53

Chi Square Test – Transfer to a 4-year College or University

			Persistence Status		
			Persisted	Did not persist	Total
Transfer to a 4-year college or university	Not likely	Count	64	24	88
		% within Persistence Status	62.7%	47.1%	57.5%
	Somewhat likely	Count	14	14	28
		% within Persistence Status	13.7%	27.5%	18.3%
	Likely	Count	16	5	21
		% within Persistence Status	15.7%	9.8%	13.7%
	Very likely	Count	8	8	16
		% within Persistence Status	7.8%	15.7%	10.5%
Total		Count	102	51	153
		% within Persistence Status	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.812[a]	3	.050
Likelihood Ratio	7.596	3	.055
Linear-by-Linear Association	2.035	1	.154
N of Valid Cases	153		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.33.

The Chi Square tests indicated that four variables were found to be statistically significant. Chi Square tests also revealed a similar response pattern for those students

that persisted and those that did not. A discussion of these findings will be provided in Chapter Five.

Correlation Results and Regression Model

A Pearson Correlation was conducted between persistence factors and the identified CCSSE items. Surprisingly, there were no statistically significant models among and between CCSSE independent variables that best predicted nontraditional student persistence as measured by items on the CCSSE. See Tables 54-56 for all Pearson Correlation analyses by persistence factor. Because data were non-parametric with no statistical significance, a Kendall's Tau coefficient was also run, with no statistical significance noted. Therefore, regression was not performed on this dataset and no predictive model was generated. Thus, the null hypothesis was accepted.

Table 54.
Pearson Correlation Analysis – Background and Defining Variables Persistence Factor

		Persistence Status
Pearson Correlation	Persistence Status	1.000
	Mark your age group	-.016
	Complete a certificate program	-.026
	Obtain an associate degree	-.028
	Transfer to a 4-year college or university	-.082
	Obtain or update job-related skills	.040
	Self-improvement/personal enjoyment	.036
	Change careers	.117
	Your sex	.0
		82
Sig. (1-tailed)	Persistence Status	.
	Mark your age group	.424
	Complete a certificate program	.374
	Obtain an associate degree	.367
	Transfer to a 4-year college or university	.160
	Obtain or update job-related skills	.312
	Self-improvement/personal enjoyment	.332
	Change careers	.077
	Your sex	.161
N	Persistence Status	150
	Mark your age group	150
	Complete a certificate program	150
	Obtain an associate degree	150
	Transfer to a 4-year college or university	150
	Obtain or update job-related skills	150
	Self-improvement/personal enjoyment	150
	Change careers	150
	Your sex	150

Table 55.
Pearson Correlation Analysis - Intent to Leave Persistence Factor

		Persistence Status
Pearson Correlation	Persistence Status	1.000
	Working effectively with others	.001
	Learning effectively on your own	.044
	Understanding yourself	.088
	Understanding people of other racial and ethnic backgrounds	.001
	Developing a personal code of values and ethics	.026
	Acquiring a job or work-related knowledge and skills	-.053
	Developing clearer career goals	.032
	Gaining information about career opportunities	.075
	How would you evaluate your entire educational experience at this college	-.046
	Worked harder than you thought you could to meet an instructor's standards or expectations	.084
	When do you plan to take classes at this college again	-.050
	Providing the support you need to thrive socially	.008
	Helping you cope with your non-academic responsibilities (work, family, etc.)	-.014
	Providing the support you need to help you succeed at this college	-.119
	Prepared two or more drafts of a paper or assignment before turning it in	-.044
	Come to class without completing readings or assignments	-.087
	Worked with classmates outside of class to prepare class assignments	-.043
	Number of assigned textbooks, manuals, books, or booklength packs of course readings	-.083
	Number of written papers or reports of any length	-.075
	Preparing for class (studying, reading, writing, rehearsing, doing homework, or other activities related to your program)	-.096
	Frequency: Academic advising/planning	-.013
	Satisfaction: Academic advising/planning	-.074
Sig. (1-tailed)	Persistence Status	.
	Working effectively with others	.495
	Learning effectively on your own	.307
	Understanding yourself	.158
	Understanding people of other racial and ethnic backgrounds	.496
	Developing a personal code of values and ethics	.385
	Acquiring a job or work-related knowledge and skills	.272
	Developing clearer career goals	.358
	Gaining information about career opportunities	.197
	How would you evaluate your entire educational experience at this college	.298
	Worked harder than you thought you could to meet an instructor's standards or expectations	.167
	When do you plan to take classes at this college again	.284
	Providing the support you need to thrive socially	.463
	Helping you cope with your non-academic responsibilities (work, family, etc.)	.437
	Providing the support you need to help you succeed at this college	.086
	Prepared two or more drafts of a paper or assignment before turning it in	.308
	Come to class without completing readings or assignments	.161
	Worked with classmates outside of class to prepare class assignments	.312
	Number of assigned textbooks, manuals, books, or booklength packs of course readings	.170

	Number of written papers or reports of any length	.196
	Preparing for class (studying, reading, writing, rehearsing, doing homework, or other activities related to your program)	.135
	Frequency: Academic advising/planning	.443
	Satisfaction: Academic advising/planning	.200
N	Persistence Status	133
	Working effectively with others	133
	Learning effectively on your own	133
	Understanding yourself	133
	Understanding people of other racial and ethnic backgrounds	133
	Developing a personal code of values and ethics	133
	Acquiring a job or work-related knowledge and skills	133
	Developing clearer career goals	133
	Gaining information about career opportunities	133
	How would you evaluate your entire educational experience at this college	133
	Worked harder than you thought you could to meet an instructor's standards or expectations	133
	When do you plan to take classes at this college again	133
	Providing the support you need to thrive socially	133
	Helping you cope with your non-academic responsibilities (work, family, etc.)	133
	Providing the support you need to help you succeed at this college	133
	Prepared two or more drafts of a paper or assignment before turning it in	133
	Come to class without completing readings or assignments	133
	Worked with classmates outside of class to prepare class assignments	133
	Number of assigned textbooks, manuals, books, or booklength packs of course readings	133
	Number of written papers or reports of any length	133
	Preparing for class (studying, reading, writing, rehearsing, doing homework, or other activities related to your program)	133
	Frequency: Academic advising/planning	133
	Satisfaction: Academic advising/planning	133

Table 56.
Pearson Correlation Analysis - Environmental Persistence Factor

		Persistence Status
Pearson Correlation	Persistence Status	1.000
	Providing the financial support you need to afford your education	-.012
	Lack of finances	-.045
	Working for pay	.003
	Working full-time	.027
	How supportive are your friends of your attending this college	.080
	How supportive is your immediate family of your attending this college	-.021
	Caring for dependents	-.010
	Do you have children who live with you	-.018
	Are you married	.153
	Providing care for dependents living with you (parents, children, spouse, etc.)	-.064
	Frequency: Transfer credit assistance	.054
	Satisfaction: Transfer credit assistance	-.012
	Importance: Transfer credit assistance	-.001
	Transfer to a 4-year college or university	.127
Sig. (1-tailed)	Persistence Status	.
	Providing the financial support you need to afford your education	.445
	Lack of finances	.301
	Working for pay	.487
	Working full-time	.377
	How supportive are your friends of your attending this college	.173
	How supportive is your immediate family of your attending this college	.404
	Caring for dependents	.452
	Do you have children who live with you	.419
	Are you married	.036
	Providing care for dependents living with you (parents, children, spouse, etc.)	.228
	Frequency: Transfer credit assistance	.266
	Satisfaction: Transfer credit assistance	.442
	Importance: Transfer credit assistance	.494
	Transfer to a 4-year college or university	.068
N	Persistence Status	139
	Providing the financial support you need to afford your education	139
	Lack of finances	139
	Working for pay	139
	Working full-time	139
	How supportive are your friends of your attending this college	139
	How supportive is your immediate family of your attending this college	139
	Caring for dependents	139
	Do you have children who live with you	139
	Are you married	139
	Providing care for dependents living with you (parents, children, spouse, etc.)	139
	Frequency: Transfer credit assistance	139
	Satisfaction: Transfer credit assistance	139
	Importance: Transfer credit assistance	139
	Transfer to a 4-year college or university	139

Summary

This study was designed to examine factors, as defined by the CCSSE, which influence nontraditional student persistence. Research questions were designed to inform the findings of the analysis. This analysis was conducted utilizing a validity panel to confirm selected CCSSE items could be used to define Bean and Metzner's (1985) persistence factors. Research was also conducted using and evaluating descriptive statistics with frequencies and percentages, chi square tests, and regression analysis. The validity panel results indicated that Bean and Metzner's (1985) persistence factors appeared to parallel CCSSE items. Descriptive statistics provided information regarding response percentages for each CCSSE item that will afford the institution under study additional information to consider. The Chi Square test revealed statistical significance with four independent variables at the $p \leq 0.10$ level. Specifically, the statistically significant variables include: complete a certificate, support from friends, satisfaction with transfer credit assistance and the goal of transferring to a 4-year college or university. The final statistical analysis consisted of a Pearson Correlation Analysis to determine if the independent variables could be constructed to predict persistence of nontraditional students within factors under study. The analysis concluded no relationship could be established and no prediction model was generated. Chapter Five will provide a discussion of the findings for each of the research questions. Conclusions stemming from answers to the research questions, as well as recommendations will also be offered

CHAPTER 5

FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this study was to explore Bean and Metzner's (1985) persistence factors as defined by items on the CCSSE to determine their impact on nontraditional student persistence. Variables that influence a nontraditional student's success and decision to persist vary and differ from influences experienced by a traditional aged student (Bean & Metzner, 1985; Greer, 1980; Miller, 1980). Understanding factors that influence persistence allow college campuses to enhance their campus environment in order to help students succeed. This chapter provides an overview of the problem and purpose of the study, research questions, the study group, discussion of the findings, summary of the findings, conclusion and recommendations of the study.

Problem of the Study

There is a lack of information using the CCSSE to define Bean and Metzner's (1985) persistence factors. Additionally, there was a lack of information regarding nontraditional student persistence as measured by Bean and Metzner (1985) items on the CCSSE.

Purpose of the Study

The purpose of the study was to identify items on the CCSSE that predict a nontraditional student's likelihood to persist utilizing Bean and Metzner's (1985) persistence factors. Students completed the CCSSE during randomly chosen classes in the spring semester. This study examined if a correlation existed between Bean and Metzner's (1985) identified persistence factors and CCSSE items. Moreover, it explored

the summary statistics of responses from nontraditional students for the identified CCSSE items. It also explored if the identified CCSSE items could be used to predict persistence.

Research Questions

In order to investigate the problem, address the purpose, and to answer the research questions of the study, the following research questions and null hypotheses were tested.

RQ1. What CCSSE items best define Bean and Metzner's (1985) persistence factors?

RQ2. What are the overall descriptive statistics for the 40 CCSSE questions under study?

RQ3. Is there a relationship in behavior of nontraditional students, as defined by 40 questions on the CCSSE, and the dependent variable of persistence?

H_o3 – There is no relationship between behavior in nontraditional students that persist into the second year and those that do not. Alpha level of 0.10

RQ 4. Can regression models of CCSSE independent variables be constructed to predict persistence of nontraditional students within factors under study?

H_o4 – There are no significant models among and between CCSSE independent variables that best predicts nontraditional student persistence as measured by CCSSE. Alpha level of 0.10

Study Group

The study group consisted of students at the selected institution who completed the Community College Survey of Student Engagement (CCSSE) during the 2007, 2008, and 2009 spring semesters. The subjects consisted of nontraditional students, defined as

those who self-reported their age as 25 years or older. Those students who persisted into the summer or fall semester immediately following the spring semester when they completed the CCSSE were the factors employed to build the study and determine the dependent variable of persistence. The Institutional Research Department provided the researcher with survey scores. Informed consent from participants was secured through customary institutional practice. The final study group consisted of 153 respondents.

Discussion of Findings

Four research questions were explored to understand factors that influence the persistence of nontraditional students. The four questions were designed to inform the problem and purpose of the study. Bean and Metzner's theory of Nontraditional Undergraduate Student Attrition Model (1985) was utilized and persistence factors contained in the model were defined through items on the CCSSE in order to explore the research questions.

Research Question 1

The first research question was designed to determine if CCSSE items could be used to define Bean and Metzner's (1985) persistence factors. Based on the results of the validity panel, face validity existed between all four Bean and Metzner's (1985) persistence factors and items on the CCSSE. There were 40 CCSSE items preliminarily identified by the research as relating to variables contained in the persistence factors. For two of the persistence factors, Academic Outcome persistence factor and Background/Defining Variables persistence factor, there was full agreement regarding the correlation. The Intent to Leave persistence factor contained 22 items and 10 items contained one "Unsure" determination. In addition, two questions in the Intent to Leave

persistence factor had "No" marks regarding the relationship. The rest of the panel members indicated a relationship existed. The Environmental persistence factor contained 14 identified items. One item received two "Unsure" determinations, while other panel members indicated a relationship existed. One other item received an "Unsure" response. The rest of the responses received a positive response regarding content validity. By a simple majority determination made by the validity panel, persistence factors could be defined by items on the CCSSE.

Research Question 2

The second research question was designed to identify the summary statistics for the CCSSE items. All items discussed in this section were not statistically significant, though the data does inform the institution under study. In reviewing summary statistics for the dependent variable of persistence, data indicates that from the 153 respondents, 66.7% persisted and 33.3% did not persist. The 66.7% persistence rate is slightly higher than the fall-to-fall persistence rate, 63%, recorded by the institution (NCES, 2010).

Academic outcome persistence factor. The Academic Outcome persistence factor measured GPA. GPA has traditionally been associated with persistence and is considered a "powerful predictor" of persistence (Bean & Metzner, 1985, p. 521). Bean and Metzner (1985) do concede however, that GPA is less predictive for older students than traditionally aged students, though it does remain a factor to be considered. In addition, GPA also impacts persistence through college policy. Though students may have a desire to persist, they may not be able to persist as a result of institutional decisions. Data demonstrates that the majority of the respondents, 69%, self-reported a B grade or higher and a small percentage of respondents, 3.9%, self-reported a C- or lower. In this study it

would be expected that GPA would be a discriminant, however, no statistical significance was found.

Background and defining variable persistence factor. The summary statistics for the Background and Defining Variables persistence factor includes data regarding age, educational goals, and gender (Bean & Metzner, 1985). In reviewing age, the highest percentage of nontraditional students fell between ages 30 to 39. Bean and Metzner (19F85) noted that attrition rates are impacted by age indirectly, with more family and work responsibilities requiring additional attention and time for the nontraditional student. Though Bean and Metzner (1985) note that older students will tend to have higher attrition rates due to this variable, their comparison is based on older students as a collective group of nontraditional students compared to traditional students. Bean and Metzner (1985) do not indicate a positive correlation where as age increases, so does attrition. This study did not find age to be a discriminant of persistence.

Educational goals, as noted by Bean and Metzner (1985), can affect the motivation of a student and their desire to persist. As indicated in Chapter Four, Bean and Metzner (1985) have also noted that a student may have a short-term, non-degree goal which can impact attrition. If a students' goal is taking coursework for another reason and they do not have a goal to complete a degree or certificate, persistence rates will fall. It could be predicted from Bean and Metzner's (1985) research that by establishing the achievement of a degree as a primary goal, persistence would increase. The majority of respondents, 71.2%, indicated their primary goal was to obtain a degree, though 11.1% indicated that an associate's degree was not a goal. The remaining items include: change careers with 49% indicating their primary goal, obtain or update job-related skills with

47.1% indicating their primary goal, self-improvement/personal enjoyment with 43.8% as their primary goal and transfer to a 4-year college/university with 20.9% as their primary goal. There was no statistical difference found between having a degree as a primary goal and persistence.

Bean and Metzner (1985) indicated that due to prevailing traditional views regarding gender roles, persistence rates for females tend to be impacted negatively by family responsibilities. Because women tend to assume conventional roles and family responsibilities, it can be expected that women will persist at lower rates than men. Data reveals that the majority of respondents, 86.3%, are female. However, gender was not found to be a discriminant when applied to persistence rates in this study.

Intent to leave persistence factor. The descriptive statistics for the Intent to Leave persistence factor include psychological outcomes (utility as defined by personal development and employment opportunities, satisfaction with educational experience, commitment to goal completion, and stress of attending), as well as academic variables (study skills/habits, academic advising, absenteeism, major uncertainty, and course availability) (Bean & Metzner, 1985).

Bean and Metzner (1985) point out that psychological outcomes impact persistence indirectly through intentions. In their review of research, Bean and Metzner (1985) indicate that studies support both career development and personal growth as factors that influence persistence. It can be expected that students citing high levels of personal development will persist at higher rates. Personal development variables are explored through five CCSSE items. 89.5% of students believe they have worked effectively with others at least “some” of the time, while another 90.1% reveal the college

has helped them to work effectively on their own at least "some" of the time. 71.8% of respondents also indicate that the college helped them develop a personal code of values and ethics at least "some." The smallest self-reported growth in personal development is revealed in question indicating "understanding people of other racial and ethnic backgrounds." 65.4% indicate the college has contributed to their development at least "some" in this area. This study revealed no statistical difference in those who persisted and those that did not, in relation to their self-reported levels of personal development.

The relevancy of a college education in relation to employment opportunities can be a factor for nontraditional students that will positively influence persistence (Bean & Metzner, 1985). It is anticipated that students who report high response rates related to career development opportunities will also have high persistence rates. Three CCSSE items were explored related to career development opportunities. 87% of respondents indicated that the college experience helped them at least "some." Another 86.2% indicate that college helped them develop clearer career goals at least "some." Approximately the same number, 83%, believe college helped them gain information about career opportunities at least "some." The findings did not support the assertion that students who persist and those who do not will have different response rates to career development activities and opportunities.

In studies explored by Bean and Metzner (1985), student satisfaction can relate to a student's enjoyment of being a student, satisfaction with intellectual stimulation, satisfaction with courses, interest in coursework, engagement as opposed to boredom, and satisfaction with the college experience. It can be anticipated that students who report high satisfaction levels will have high persistence rates. One CCSSE question was found

to correlate to this variable and data indicates that 91.5% of students rate their college experience as "good" to "excellent." There was no statistical difference between levels of satisfaction and students who persisted.

Studies revealed by Bean and Metzner (1985) indicate that there is a positive correlation between prematriculation and postmatriculation goal commitments and persistence. Bean and Metzner (1985) indicate that goal commitment is associated with the educational objectives of a student and can influence persistence. It is anticipated that students who report strong levels of goal commitment will also persist at higher rates. Commitment to goal completion is examined through two CCSSE items. The first explores how hard a student works to meet the instructor's standards and expectations. 96.1% of respondents reveal at least a minimal response of "sometimes" and 60.2% of respondents who revealed they work harder "often" or "very often." The CCSSE item that measured a student's commitment to take classes at the college again indicates that 62.7% of students have a desire to take classes with the next 12 months. 18.3% demonstrate a low commitment and have no plans to return or are uncertain. There was no statistical difference found between responses related to goal commitments and persistence.

Stress of attending is examined through three CCSSE items. Bean and Metzner (1985) indicate that stress can occur from factors that are unrelated to college attendance, as well as factors related to matriculation and these factors will influence attrition. Through Bean and Metzner's (1985) research, studies should reveal that reported high stress levels will reveal lower persistence rates. A review of the data indicates that 30.7% of students believe "very little" support has been provided to help them thrive socially. In addition,

34.6% report a “very little” response to the question how much the college has helped them cope with non-academic responsibilities. In sharp contrast, 98% of students believe that at least “some” to “very much” support has been provided by the college in order to help them succeed at the college. Though responses regarding levels of support differ, there was no statistical significance found related to support and persistence.

Academic variables also play a role in the Intent to Leave persistence factor. Bean and Metzner (1985) indicated that studies revealed an indirect effect on persistence, as academic variables relate to the academic integration of the student at college. Academic variables include: study skills and habits, academic advising, absenteeism, major uncertainty, and course availability (Bean & Metzner, 1985). It is anticipated that reported high levels of academic integration and investment will result in increased persistence. Nine CCSSE items were identified that explore academic variables.

In reviewing CCSSE items related to study skills, 89.5% respondents indicate at least a “sometimes” response to how often they prepared two or more drafts of a paper or assignment before turning it in. The next item explored how often a student came to class without completing readings or assignments. 1.3% of students indicated a “very often” response, while 43.1% of students responded they “never” came to class without completing readings or assignments. When asked how often they worked with classmates outside of class, 63.4% of respondents indicated a “never” or “sometimes” response. In a review of the number of assigned textbooks, manuals, books, or booklength packs of courses that were read, 66.7% indicate they have read between one and ten. Similarly, when asked how many papers or reports were written, 66% of students indicate they have written between one and ten. There was no statistical difference between the academic

variables explored and persistence, and thus Bean and Metzner's (1985) findings were not supported.

In the Nontraditional Undergraduate Student Attrition Model, academic advising factors focus on satisfaction with advising (Bean & Metzner, 1985). Bean and Metzner (1985) note studies demonstrate that students who have withdrawn have indicated improved academic advising would have prevented them from leaving the institution. It is expected that students who report high satisfaction rates with academic advising will also experience higher persistence rates. One CCSSE item was found to correlate to academic advising. The item explored satisfaction with advising and 79.7% of students indicate a "somewhat" or "very" satisfied level. There was a 12.4% response rate that indicated "N.A." A relationship between persistence and satisfaction with academic advising was not found to be statistically significant.

Absenteeism is a gauge for the level of interaction a student might have with the institution (Bean & Metzner, 1985). High levels of absenteeism can also relate to low self confidence as a student, and be impacted by job and family responsibilities (Bean & Metzner, 1985). Based on this finding, it would be expected that students who report high levels of absenteeism will persist at smaller rates. One CCSSE item asked students how often they skipped class. 78.4% of students reported that they "never" skip class. Only .7% indicated they skip class often. As a result of this study, absenteeism was not found to be a discriminant as it relates to persistence.

Environmental persistence factor. The Environmental persistence factor explores: a perceived or real lack of finances, working for long hours, lacking encouragement, family responsibilities, and a perceived opportunity to transfer (Bean & Metzner, 1985).

There were 11 CCSSE items that correlate to these factors and described in the statistical summary.

Bean and Metzner (1985) indicate that research demonstrates a positive correlation between a lack of finances and attrition and it is often cited by students as a reason for withdrawal. As a result of Bean and Metzner's (1985) work, it would be anticipated that students reporting high levels of financial difficulty would also have low levels of persistence. Two CCSSE items were identified as related to financial considerations. The first question, how much the college provided financial support needed to afford an education, received a response rate of 81.1% from students who believe it was provided "quite a bit" or "very much." However, 33.3% of students indicate that a lack of finances would "very likely" cause them to withdraw. If "somewhat likely" and "likely" responses are also included, the percentage of students who would withdraw due to lack of finances increases to 84.2%. No statistical difference was found in response rates of financial difficulty and persistence.

A relationship between the number of hours per week a student works and the student's persistence in college has been demonstrated (Bean & Metzner, 1985). However, a positive correlation exists when students are employed fewer than 20 hours per week, while work hours in excess of 20 result in a negative correlation (Astin, 1975). It is anticipated that students who report excessive work hours would also report lower persistence rates. There were two CCSSE items that correlated to hours of employment. The first item addressed how many hours in a week a student worked for pay and revealed that 37.3% of students indicated they work more than 20 hours per week. In addition, 58.8% of students indicated that they worked less than 20 hours per week. The

second question, "how likely would working full-time cause you to withdraw," reveals 62.8% of respondents indicated it would be "somewhat likely" or "not likely." Approximately one-fourth of the respondents, 25.5%, indicated working full-time would "very likely" cause them to withdraw. There was no statistical significance found between hours of work or working full-time and persistence.

Related to outside encouragement, Bean and Metzner (1985) indicate that there is a positive correlation between support from family, friends and employers and persistence. It is anticipated that higher levels of support reported by students will result in higher levels of persistence. Two CCSSE items were found to correlate to this factor, one of which was found to be statistically significant and will be discussed in the Chi Square test section. The other item, "how supportive is your immediate family of you attending this college," was not found to be statistically significant. Summary statistics indicate that 87.2% of students had "quite a bit" or "extremely" supportive families. There was no statistical difference in levels of support between those students who persisted and those that did not persist.

Responsibilities to care for dependents and family pressures are listed as major reasons by students who withdraw (Bean & Metzner, 1985; Sheldon, 1980). It would be anticipated that students who report high rates of responsibility in caring for depending and having family responsibilities would also report higher levels of attrition. There were four CCSSE items that correlated to this variable. In the first question, 35.9% of respondents indicate that caring for dependents would "likely" or "very likely" cause them to withdraw. Another 39.2% indicated caring for dependents would "not likely" cause them to withdraw. The next question, "do you have children who live with you,"

revealed that three-fourths of respondents, 75.8%, have children living with them. The next question related to marital status and 54.2% of respondents indicated that they are married. The final question asked students to indicate the number of hours they had to provide care for dependents living with them. Response rates revealed a strong bimodal distribution, with 17% of respondents indicating "none" and 64.7% of respondents indicating they spent more than 30 hours caring for dependents. The responses below 30 hours were in the single-digit percentages. No statistical significance was found between response rates related to family responsibilities and persistence.

The opportunity to transfer is the last variable considered as part of the Environmental persistence factor. A review of research completed by Bean and Metzner (1985) indicate that students' transferring to a four-year institution was a major reason for withdrawal. However, if there is a perception of difficulty in transferring, a negative relationship to attrition exists (Bean & Metzner, 1985; White, 1972). Based on Bean and Metzner's (1985) analysis, it can be expected that students who express high use of transfer credit assistance are more likely to transfer and persistence will decrease. In addition, it is anticipated that students who attribute higher levels of importance to transfer assistance will also experience a low degree of persistence due to their inferred desire and/or plans to transfer. Four CCSSE items were found to correlate to this factor. Two CCSSE items were found to be statistically significant and will be discussed in the next section. The remaining two CCSSE items related to the frequency of use of transfer credit assistance and the importance of transfer credit assistance. Related to frequency of use, 77.7% of respondents indicated "rarely/never" or "don't know/N.A." related to their use of transfer credit assistance. However, 62.8% believe transfer credit assistance is

"somewhat" or "very" important. There was no statistically significant relationship found between frequency of use and importance attributed to transfer credit assistance and persistence.

The summary analysis provided reveals limited statistical significance in individual variables associated with Bean and Metzner's (1985) persistence factors and persistence. However, the summary statistics can assist the institution under study in capturing a picture of nontraditional student behavior, as well as a lens through which to view the CCSSE data. Research Question 3 will address the four variables that were found to be statistically significant through Chi Square tests.

Research Question 3

Research question three was designed to determine if there was a relationship in behavior of nontraditional students, as measured by CCSSE items, and the dependent variable of persistence. There were four items that were statistically significant and a relationship in behavior and the dependent variable of persistence could be determined.

The first item is a variable contained in the Background/Defining Variable persistence factor. Bean and Metzner (1985) indicate that background and defining variables affect how the individual interacts with the institution. In addition, Bean and Metzner note through their research review that educational goals "contain motivational influences that affect persistence at a college" (1985, p 495). It is anticipated that degree attainment as a primary goal would increase rates of persistence. The CCSSE item found to be statistically significant and which correlates to educational goals, asks the student if it is their "primary goal," "secondary goal," or "not a goal" for them to complete a certificate program. Educational goals were not found to be a determinant of persistence.

Data indicates that of those students who persisted, 42.2% indicated that completion of a certificate program was their primary goal. Similarly for those who did not persist, 46% indicated completion of a certificate program was their primary goal. The number of respondents that persisted who indicated completion of a certificate was a secondary goal had a 24.5% response rate, while that did not persist had a 10% response rate. Finally, 33% of those that persisted indicated that a certificate was not an academic goal, while those that did not persist had a 44% response rate. Both persisters and nonpersisters who responded that completion of a certificate was a "primary goal" persisted at similar rates. However, Bean and Metzner's (1985) assertion could be supported by a review of "secondary goal" or "not a goal" responses. In those instances where completion of a certificate was a secondary goal, respondents were found to persist at higher rates. In cases where certificate attainment was not a goal, persistence fell.

The last three items found to be statistically significant are contained in the Environmental persistence factor. Bean and Metzner (1985) indicate that environmental persistence factors are variables of which the institution cannot control or affect, but can influence a student's decision to persist. Environmental persistence factors include: a perceived or real lack of finances, working for long hours, lacking encouragement, family responsibilities, and a perceived opportunity to transfer (Bean & Metzner, 1985). One of the CCSSE items found to be statistically significant through the Chi Square test measures the level of support students believe they obtain from friends for attendance at the college. Bean and Metzner (1985) note through their research review that outside encouragement from friends can affect persistence decisions. In addition, peers of nontraditional students from outside the college can be as influential as those within the

college (Anderson, 1981; Bean & Metzner, 1985). It can also be noted that discouragement of other alternatives to college can have a negative relationship to attrition (Anderson, 1981; Bean & Metzner, 1985). It is anticipated based on these findings that friend support will have a positive effect on persistence.

According to the data, 69.6% of respondents who persisted indicated that their friends were "extremely" supportive. In opposition to Bean and Metzner's (1985) assertion, 70.6% of respondents that did not persist indicated the same level of support. Both persisters and non-persisters indicated a 0% response rate regarding having friends who were "not very" supportive. Percentage rates were almost identical in the two extreme answers. However, differences are highlighted in the responses "quite a bit" and "somewhat" to the question of support provided by friends. Again, in opposition to Bean and Metzner's (1985) theory, nonpersisters indicated they received "quite a bit" of support from friends with a 29.4% response rate, while those that persisted had a 19.6% response rate. Finally, persisting respondents recorded higher levels of "somewhat" support, 10.8%, than did those who did not persist, 0%. There is a statistical difference in the responses provided by students who persisted as opposed to those who did not persist. However, support of Bean and Metzner's (1985) assertion that friend support influences persistence was only found in the "somewhat" response.

The opportunity to transfer is another variable that supports the Environmental persistence factor. Research indicates that if students believe that it would be difficult to transfer, they are more likely to persist (Bean, 1982; Bean & Metzner, 1985). If students are satisfied with the transfer credit assistance provided to them, it is believed that perceptions of difficulty will decrease and persistence will decrease.

Two CCSSE items were found to correlate and be statistically significant. The first question relates to a student's satisfaction with transfer credit assistance. In the response "very" satisfied, persisters had a 13.3% response rate, while nonpersisters had a 5.9% response rate. This finding does not support the assertion that increased satisfaction in transfer credit assistance will result in decreased persistence. There was little difference in the "somewhat" response by persisters, 19.4%, and nonpersisters, 21.6%. In the "not at all" response category, persisters had a 5.1% response rate, while nonpersisters had a 17.6% response rate. This data also does not support the assertion that satisfaction with transfer credit assistance will decrease perceptions of difficulty and in turn, decrease persistence. Finally, 62.2% of respondents who persisted indicated that their satisfaction was "n.a." Similarly for those that did not persist, 54.9% of respondents indicated an "n.a." response. In contrast with previous answers, students who are not using transfer credit assistance or are not aware it exists are persisting at higher rates. This finding does seem to support Bean and Metzner's (1985) findings.

The final statistically significant item also explores the transfer topic, asking students if transferring to a 4-year college or university would cause them to withdraw from classes or college. If students perceive a high opportunity to transfer, it will have a negative effect on persistence and transferring is the primary reason indicated by community college students who withdraw (Bean & Metzner, 1985). It is anticipated that students who indicate a high likelihood of withdrawing due to transferring, will have lower persistence rates.

Research reveals that the respondents who indicated it would be "not likely" that transferring would cause them to withdraw had a 62.7% response rate from persisters and

a 47.1% response rate from nonpersisters. In addition, those who indicated transferring would "very likely" cause them to withdraw, had a 7.8% response rate from persisters and a 15.7% response rate from nonpersisters. Both of these findings support Bean and Metzner's (1985) findings that if students indicate they are less likely to withdraw due to transferring, their persistence rate increases. In opposition however, students who answered "likely" had a 15.7% response rate from persisters and a 9.8% response rate from nonpersisters. It would be expected that if it is "likely" a student would withdraw due to transferring, there would be a higher rate of nonpersisters. In addition, the "somewhat" answer provided indicates a 13.7% response rate from persisters and a 27.5% response rate from nonpersisters. The low likelihood of withdrawing due to transferring should result in an increase in persistence. Based on the data, Bean and Metzner's (1985) theory can be supported at the extreme responses of "not likely" and "very likely."

Four individual CCSSE items were found to be statistically significant through Chi Square tests, though they do not define any of the persistence factors exclusively. The four Bean and Metzner (1985) persistence factors were not found to be statistically significant. In the majority of item responses, there was no significant difference between respondents who persisted and those that did not persist.

Null hypothesis number three. The analysis did not confirm that there was a relationship between behavior in nontraditional students that persist into the second year and those that do not. Therefore chi square analysis led to the acceptance (failed to reject) null hypothesis three, with four exceptions.

Research Question 4

Research question four utilized regression models of CCSSE independent variables to determine if models could be constructed to predict persistence. There were no statistically significant models found.

Null hypothesis number four. The analysis did not confirm that significant models among and between CCSSE independent variables could best predict nontraditional student persistence as measured by CCSSE. Therefore, regression analysis led to the acceptance (failed to reject) null hypothesis four.

Summary of Findings Discussion

Validity panel results indicate that Bean and Metzner's (1985) persistence factors appear to be parallel to the identified CCSSE items. Those items were explored individually to glean information from the summary statistics.

Though identified CCSSE items had limited statistical significance, a further in-depth analysis of the exclusive responses from nontraditional students did provide insight for the institution under study and may deserve further research. Responses that may provide additional insight include the question related to transferring to a 4-year college or university. 20.9% of respondents indicate that their primary goal is to transfer to a 4-year college/university and 77.7% are utilizing transfer assistance services. There seems to be a disconnect between academic goals and services utilized.

Non-academic responsibilities may also influence nontraditional students. 34.6% of respondents indicate that the college provides very little support to help them cope with non-academic responsibilities. As mentioned previously, gender is factored into the attrition research as women continue to assume conventional roles that take them away

from academic concerns, such as responsibilities for child-care. Consequently, these increased responsibilities tend to have a positive correlation with attrition rates. At the institution under study, 86.3% of respondents indicate they are female. In addition, 75.8% indicate that they have children living in the home. Another 64.7% spend more than 30 hours caring for dependents. Finally, 58.8% of respondents indicate they work more than 20 hours per week, which studies show correspond negatively with persistence.

Finally, 18.3% of students have a low commitment or no plans to return to classes in the next 12 months. Combined with the statistic that 28.8% of students report their use of academic advising as "rarely/never," this is significant for practical reasons. A large number of students may not have a clear goal or path for them to succeed. An advisor could assist them, but students are not utilizing these services.

There were four CCSSE items found to be statistically significant that supported two of Bean and Metzner's (1985) persistence factors. The data indicated that those students who persisted and those that did not persist had similar responses on the majority of CCSSE items, indicating to the researcher that there are other influences impacting a nontraditional student's decision to persist or not to persist. However, the four variables found to be statistically significant provide valuable information. The students who indicated certificate attainment as a secondary goal did persist at higher rates. If students indicated certificate attainment as "not a goal," they persisted at lower rates. A possible confounding variable in answering this question may be due to some programs that have concurrent enrollment, which confounds the interpretation of the CCSSE questions. The second statistically significant item related to support from friends. The response that supported Bean and Metzner's (1985) assertion that friend support increases persistence

was included in the response indicating "somewhat" support from friends. Persisting respondents recorded higher response rates in this area than nonpersisters. Interestingly, nonpersisters recorded friends that are "extremely" supportive at slightly higher rates than persisters. In addition, higher rates of "quite a bit" of support were seen from those who did not persist as opposed to those who persisted. Neither persisters nor nonpersisters indicated they had friends that were "not very" supportive. The third item found to be statistically significant illustrated students satisfaction with transfer credit assistance. Contrary to Bean and Metzner (1985), those students indicating a "very" satisfied response persisted at higher levels. In addition, those who indicated a "not at all" satisfied response, persisted at lower rates. It was predicted that if students are satisfied with transfer credit assistance, they would perceive less difficulty in transferring and would persist at lower rates. The area in which this assertion could be proven was in those who responded "n.a" The response rate was greater for those that persisted, than those that did not persist indicating that students who do not use transfer credit assistance will persist at higher rates. The last statistically significant item relates to the reason students indicate as their reason for withdraw from the college. As predicted, students indicating that transferring to a 4-year college/university would "very likely" be the reason they withdraw did not persist at higher rates. Those indicating it would "not likely" be the reason, did persist at higher rates.

The CCSSE items found to be statistically significant had an effect size that was so small, there was very limited practical significance. As a result, it is difficult to recommend action based on the findings.

Finally, efforts to determine if a regression model of CCSSE items could be constructed to predict persistence of nontraditional students could not be made. A Pearson Correlation analysis found none of the items statistically significant.

Conclusion

As a result of the analysis and subsequent findings, three conclusions were drawn. These conclusions resulted in areas worthy of discussion by researchers and practitioners.

Based on the data and analyses conducted, it can be concluded CCSSE items did not support Bean and Metzner's (1985) Nontraditional Undergraduate Student Attrition Model. Although results from the validity panel demonstrate that Bean and Metzner's (1985) persistence factors appear to parallel CCSSE items, there were only four CCSSE items out of 40 CCSSE items that were found to discriminate by persistence. Bean and Metzner's Nontraditional Undergraduate Student Attrition Model (1985) is not supported in this study and persistence factors they have identified did not predict persistence.

The second conclusion made is the CCSSE did not discriminate between persistence and non-persistence for nontraditional students at the institution under study in 36 out of 40 items identified. As indicated in the literature review, the CCSSE measures institutional practices and student behavior and can be used as a diagnostic tool (CCSSE, 2010). A Chi Square analysis was conducted for each CCSSE item and only four items were found to be statistically significant. Based on this study, the CCSSE was unable to predict persistence based on response rates to 36 items.

The final conclusion offered is that the results of this study provide cautious support for four CCSSE items that relate to nontraditional student persistence. The first CCSSE item illustrates those students who listed certificate attainment as a secondary

goal persisted at higher rates. In addition, those respondents who indicated certificate attainment was "not a goal" persisted at smaller rates. This result demonstrates the importance of establishing academic goals in order to increase persistence rates. The second item found to be statistically significant includes the support students indicate they have from friends. Students who persisted and students who did not persist both indicated they had at least "quite a bit" of support. In addition, it was expected based on Bean and Metzner's model (1985) that family support was also a factor. This research revealed that friend support is a stronger factor than family support. The third statistically significant item relates to satisfaction with transfer credit assistance. If students are very satisfied with transfer credit assistance or indicated "n.a" they are more likely to persist. The final conclusion regarding statistically significant items includes a student's intent to transfer. If a student indicates they intend to transfer to a 4-year college/university, findings of this study reveals those students are less likely to persist.

Based on these findings and due to results that are so random, it can be concluded that there is no profile of the nontraditional student. The nontraditional student population seems to be fluid and their behavior tends to be unpredictable. In addition, the findings in this study had very small effect sizes and recommendations based on these findings are limited with limited practical significance.

Recommendations

The following recommendations will provide practitioners ways in which they might improve campus services for nontraditional students.

- Understand the unique population in the context of individual campuses. Nontraditional students are varied in their goals, motivations, academic

abilities and backgrounds. In addition, community colleges serve as a point of entry for nontraditional students. The nature of the community college is also unique, experiencing more part-time students, students who tend to be from lower income families, campuses tend to have higher first-generation rates, students tend to complete at lower rates, and academic readiness varies greatly. Institutional research specific to the campus and the student population will provide valuable insight. A "one size fits all" belief serves no one, including the student and the institution.

- Academic advising should include setting academic goals. This study reveals the importance of setting academic goals in order to increase persistence. By establishing goals, students are more likely to persist and possibly be motivated toward completion. Through goal-setting, students can establish an academic plan/track to follow and know what's expected, which provide motivation. Nontraditional students are often constrained by external obligations and responsibilities, and as indicated previously, do not label themselves as "students" due to their other numerous roles. Through goal-setting, nontraditional students can establish a timeline and financial plan that allows them to complete their academic and personal goals and increase persistence toward those goals.
- Academic advising should include transfer credit assistance. For similar reasons indicating the importance of having academic goals, nontraditional students are more likely to persist if they are satisfied with transfer credit assistance. By establishing a satisfactory transfer plan, they

are more likely to have a timeline as well as an understanding regarding the scope of their academic goals. By developing a plan of which they are satisfied, their persistence rate also increases.

- Institutions may want to solicit friend support. It is important that institutions are cognizant of the support or lack thereof that comes from a wide audience for nontraditional students. If there are opportunities to include friends in programs, marketing, or other events or activities, nontraditional students may benefit from the enhanced support offered by their friends.
- Explore additional persistence factors. Further studies exploring the demands on nontraditional students in the context of current societal influences and job market changes can provide additional insight and assist in managing campus resources. Student populations continue to change, as well as the demands on their lives. The factors that were initially identified by Bean and Metzner (1985) may need to be re-examined in the context of today's nontraditional student. Bean and Metzner's (1985) persistence factors may no longer have the same level of significance or relevance in nontraditional students lives. As a result of this research, it is apparent that nontraditional students are a fluid population that is influenced and motivated in multiple ways.
- Conduct longitudinal studies that account for stop outs. Persistence measures from spring to summer and/or fall neglected to account for stop outs. For a broad picture of nontraditional student persistence, a

longitudinal study, factoring in decisions made by students to leave the institution and return after a period of time may shed additional light on attrition. In addition, research exploring reasons why nontraditional students re-enroll may also aid institutions in targeting support services that encourage and support the nontraditional student and minimizes attrition factors.

- Future research should consider student's academic goals, rather than degree completion, to evaluate individual student success. Though degree completion provides an easy way in which to evaluate success, it is not always the single determination of success. For example, students returning to complete a few classes for professional development reasons are no less successful than those who complete their goal of a degree.

Summary

A validity panel provided confirmation that Bean and Metzner's (1985) persistence factors could be defined by items on the CCSSE. Also, an analysis of the data revealed that there is a relationship between behavior in nontraditional students that persist and those that do not persist for four CCSSE items. However, the four individual CCSSE items serve in support with other items to define the four persistence factors identified by Bean and Metzner (1985). Consequently, no conclusion could be made to support that a relationship exists between any of the four persistence factors and the dependent variable of persistence. Finally, data revealed that there are no identified CCSSE items that best predict a nontraditional student's decision to persist. This study did confirm null hypothesis three and four.

While the four factors that were predicted to influence a nontraditional student's decision to persist could not be supported through this research, a more in-depth look at CCSSE items did provide valuable for the institution under study. In addition, recommendations were made that could guide further research and improve college services for nontraditional students that will assist them in reaching their goals.

As indicated in the literature review, broad generalizations are difficult to make regarding nontraditional student. Their educational background, academic ability, socioeconomic background, external support, and short-term and long-term goals differ greatly. Even agreeing upon a common definition of "nontraditional" can be complicated. In addition, each campus culture is unique and students experience the institution in different ways, through their own distinct lens and their individual levels of need for challenge and support. As a result, broad generalizations inferred from research regarding nontraditional students should be made cautiously. Finally, it is the mission of community colleges to serve a wide variety of learners and through continued research and increased understanding, community colleges can offer services and programs that enhance students learning and success.

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Appendix A

Validity Panel Survey

As part of a research project being conducted, I am attempting to define variables identified by Bean and Metzner (1985), through items on the Community College Survey of Student Engagement (CCSSE). I have prepared four tables with the four primary variables, as well as a column giving a brief description/definition. Using Table 1 as an example, the primary variable is Academic Outcome and it is defined by college academic performance or college GPA. The first column is the variable description, GPA. The second column is the CCSSE question that I believe corresponds to the Academic Outcome variable, as defined by GPA, which is question 21. The third column contains the CCSSE possible answers (offered as additional information for you regarding the CCSSE question).

I would appreciate your assistance in reviewing the primary variable and definition, to determine if the 40 CCSSE questions that I have identified correlate to the respective variable. If you believe there is a correlation, in the fourth column, please circle "Yes." If you do not believe there is a correlation, please circle. "No." Please circle "Don't know/Unsure" if that answer applies. Thank you for your assistance in this research project.

Table 1.
Academic Outcome – College academic performance, college GPA (Bean and Metzner, 1985).

Variable Description	CCSSE Question that correlates	Definition/Answers	Correlation
GPA	Q. 21 At this college, in what range is your overall college grade average?	A. A B. A- to B+ C. B D. B- to C+ E. C F. C- or lower G. Do not have a GPA at this school H. Pass/fail classes only	Yes No Don't know/Unsure

Table 2.
Background/Defining Variables – Educational goals, high school performance, ethnicity, gender, age, enrollment status, and residence (Bean and Metzner, 1985).

Variable Description	CCSSE Question that correlates	Definition/Answers	Correlation
Age	Q. 29 Mark your age group	A. Under 1 B. 18 to 19 C. 20 to 21 D. 22 to 24 E. 25 to 29 F. 30 to 39 G. 40 to 49 H. 50 to 64 I. 65+	Yes No Don't know/Unsure
Educational Goals	Q. 17 Indicate which of the following are your reasons/goals for attending this college.	G. Complete a certificate program H. Obtain an associate degree I. Transfer to a 4-year college or university J. Obtain or update job-related skills K. Self-improvement/personal enjoyment L. Change careers	Yes No Don't know/Unsure
Gender	Q. 30 Your sex	A. Male B. Female	Yes No Don't know/Unsure

Table 3.
Intent to Leave Persistence Factor – Student's intention of leaving their present institution; includes psychological outcomes and academic variables (Bean and Metzner, 1985).

- *Psychological Outcomes* – Utility (as defined by usefulness for employment opportunities or personal development), satisfaction with educational experience, commitment to goal completion, stress of attending (Bean and Metzner, 1985).
- *Academic Variables* – Study skills and habits, academic advising, absenteeism, major certainty, and course availability (Bean and Metzner, 1985).

Variable Description	CCSSE Question that Correlates	Definition/Answers	Correlation
Utility/Practicality of Getting a Degree – Personal Development (Psychological Outcome)	Q.12 How much has your experience at this college contributed to your knowledge, skills, and personal development in the following areas: h. Working effectively with others	A. Very much B. Quite a bit C. Some D. Very Little	Yes No Don't know/Unsure
Utility/Practicality of Getting a Degree – Personal Development (Psychological Outcome)	Q.12 How much has your experience at this college contributed to your knowledge, skills, and personal development in the following areas: i. Learning effectively on your own	A. Very much B. Quite a bit C. Some D. Very Little	Yes No Don't know/Unsure
Utility/Practicality of Getting a Degree – Personal Development (Psychological Outcome)	Q.12 How much has your experience at this college contributed to your knowledge, skills, and personal development in the following areas: j. Understanding yourself	A. Very much B. Quite a bit C. Some D. Very Little	Yes No Don't know/Unsure
Utility/Practicality of Getting a Degree – Personal Development (Psychological Outcome)	Q.12 How much has your experience at this college contributed to your knowledge, skills, and personal development in the following areas: k. Understanding people of other racial and ethnic backgrounds	A. Very much B. Quite a bit C. Some D. Very Little	Yes No Don't know/Unsure
Utility/Practicality of Getting a Degree – Personal Development (Psychological Outcome)	Q.12 How much has your experience at this college contributed to your knowledge, skills, and personal development in the following areas: l. Developing a personal code of values and ethics	A. Very much B. Quite a bit C. Some D. Very Little	Yes No Don't know/Unsure
Utility /Practicality of Getting a Degree – Usefulness for Employment Opportunities (Psychological	Q. 12 How much has your experience at this college contributed to your knowledge, skills, and personal development in the following areas: b. Acquiring job or work-related	E. Very much F. Quite a bit G. Some H. Very little	Yes No Don't know/Unsure

Outcome)	knowledge and skills		
Utility/Practicality of Getting a Degree – Usefulness for Employment Opportunities (Psychological Outcome)	Q.12 How much has your experience at this college contributed to your knowledge, skills, and personal development in the following areas: n. Developing clearer career goals	E. Very much F. Quite a bit G. Some H. Very little	Yes No Don't know/Unsure
Utility/Practicality of Getting a Degree – Usefulness for Employment Opportunities (Psychological Outcome)	Q.12 How much has your experience at this college contributed to your knowledge, skills, and personal development in the following areas: o. Gaining information about career opportunities	E. Very much F. Quite a bit G. Some H. Very little	Yes No Don't know/Unsure
Student Satisfaction with Educational Experience (Psychological Outcome)	Q. 27 How would you evaluate your entire educational experience at this college?	A. Excellent E. Good F. Fair G. Poor	Yes No Don't know/Unsure
Goal Commitment (Psychological Outcome)	Q. 4 In your experiences at this college during the current school year, about how often have you done each of the following: p. Worked harder than you thought you could to meet an instructor's standards or expectations.	A. Very Often B. Often C. Sometimes D. Never	Yes No Don't know/Unsure
Goal Commitment (Psychological Outcome)	Q. 20 When do you plan to take classes at this college again?	E. I will accomplish my goal(s) during this term and will not be returning F. I have no current plan to return G. Within the next 12 months H. Uncertain	Yes No Don't know/Unsure
Stress of Attending (Psychological Outcome)	Q. 9 How much does this college emphasize each of the following: b. Providing the support you need to help you succeed at this college	E. Very much F. Quite a bit G. Some H. Very little	Yes No Don't know/Unsure
Stress of Attending (Psychological Outcome)	Q. 9 How much does this college emphasize each of the following: d. Helping you cope with your non-academic responsibilities	E. Very much F. Quite a bit G. Some H. Very little	Yes No Don't know/Unsure
Stress of Attending (Psychological Outcome)	Q. 9 How much does this college emphasize each of the following: e. Proving the support you need to thrive socially	E. Very much F. Quite a bit G. Some H. Very little	Yes No

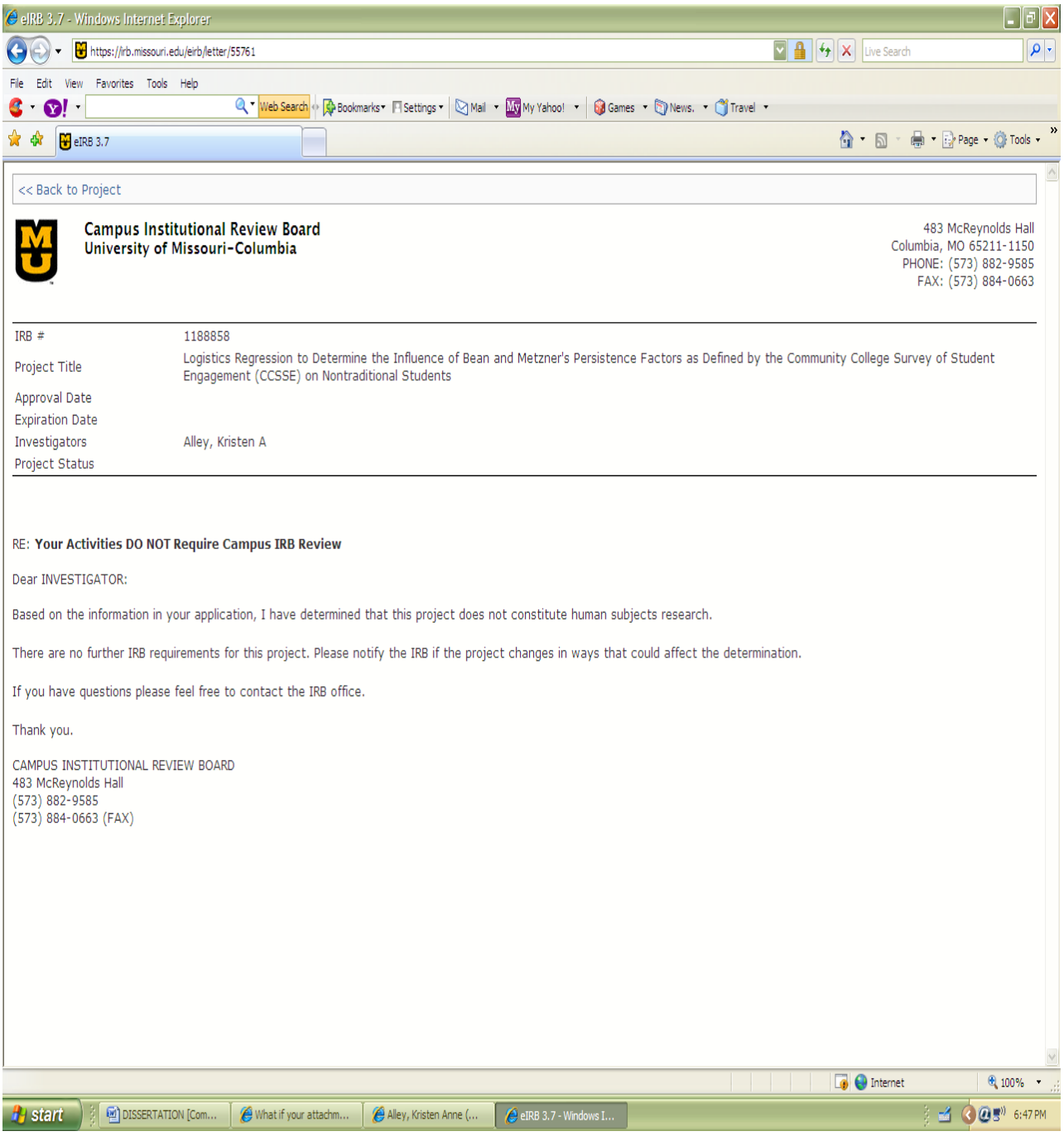
			Don't know/Unsure
Study Habits (Academic)	Q. 4 In your experiences at this college during the current school year, about how often have you done each of the following: c. Prepared two or more drafts of a paper or assignment before turning it in	E. Very often F. Often G. Sometimes H. Never	Yes No Don't know/Unsure
Studying Habits (Academic)	Q. 4 In your experiences at this college during the current school year, about how often have you done each of the following: e. Come to class without completing readings or assignments	E. Very often F. Often G. Sometimes H. Never	Yes No Don't know/Unsure
Study Habits (Academic)	Q. 4 In your experiences at this college during the current school year, about how often have you done each of the following: g. Worked with classmates outside of class to prepare class assignments	E. Very often F. Often G. Sometimes H. Never	Yes No Don't know/Unsure
Study Habits (Academic)	Q. 6 During the current school year, about how much reading and writing have you done at this college: a. Number of assigned textbooks, manual, books, or book-length packs of course readings	F. None G. 1 to 4 H. 5 to 10 I. 11 to 20 J. More than 20	Yes No Don't know/Unsure
Study Habits (Academic)	Q. 6 During the current school year, about how much reading and writing have you done at this college: c. Number of written papers or reports of any length	F. None G. 1 to 4 H. 5 to 10 I. 11 to 20 J. More than 20	Yes No Don't know/Unsure
Study Habits (Academic)	Q. 10 About how many hours do you spend in a typical 7-day week doing each of the following? a. Preparing for class (studying, reading, writing, rehearsing, doing homework, or other activities related to your program)	G. None H. 1-5 I. 6-10 J. 11-20 K. 21-30 L. More than 30	Yes No Don't know/Unsure
Academic Advising (Academic)	Q. 13, Section 2, Part a. Please answer…HOW SATISFIED you are with the services: Academic advising/planning	Satisfaction E. Very F. Somewhat G. Not at all H. N.A.	Yes No Don't know/Unsure
Absenteeism (Academic)	Q. 4 In your experiences at this college during the current school year, about how often have you done each of the following: u. Skipped class	A. Very often B. Often C. Sometimes D. Never	Yes No Don't know/Unsure

Table 4.
Environmental Persistence Factor – A perceived or real lack of finances, working for long hours, lacking encouragement, family responsibilities, and a perceived opportunity to transfer (Bean and Metzner, 1985).

Variable Description	CCSSE Question that Correlates	Definition/Answers	
Finances	Q. 9 How much does this college emphasize each of the following? f. Providing the financial support you need to afford your education	E. Very much F. Quite a bit G. Some H. Very little	Yes No Don't know/Unsure
Finances	Q. 14. How likely is it that the following issues would cause you to withdraw from class or from this college? d. Lack of finances	E. Very likely F. Likely G. Somewhat likely H. Not likely	Yes No Don't know/Unsure
Hours of Employment	Q. 10 About how many hours do you spend in a typical 7-day week doing each of the following? b. Working for pay	G. None H. 1-5 I. 6-10 J. 11-20 K. 21-30 L. More than 30	Yes No Don't know/Unsure
Hours of Employment	Q. 14. How likely is it that the following issues would cause you to withdraw from class or from this college a. Working full-time	E. Very likely F. Likely G. Somewhat likely H. Not likely	Yes No Don't know/Unsure
Outside Encouragement	Q. 15 How supportive are your friends of you attending this college?	E. Extremely F. Quite a bit G. Somewhat H. Not very	Yes No Don't know/Unsure
Outside Encouragement	Q. 16 How supportive is your immediate family of you attending this college?	E. Extremely F. Quite a bit G. Somewhat H. Not very	Yes No Don't know/Unsure
Family Responsibilities	Q. 14. How likely is it that the following issues would cause you to withdraw from class or from this college b. Caring for dependents	E. Very likely F. Likely G. Somewhat likely H. Not likely	Yes No Don't know/Unsure
Family Responsibilities	Q. 28 Do you have children who live with you?	A. Yes B. No	Yes

			No Don't know/Unsure
Family Responsibilities	Q. 31 Are you married?	A. Yes B. No	Yes No Don't know/Unsure
Family Responsibilities	Q. 10 About how many hours do you spend in a typical 7-day week doing each of the following? d. Providing care for dependents living with you (parents, children, spouse, etc)	G. None H. 1-5 I. 6-10 J. 11-20 K. 21-30 L. More than 30	Yes No Don't know/Unsure
Opportunity to Transfer	Q. 13, Section 1, Part j. HOW OFTEN you use the following services – Transfer credit assistance	Frequency of Use E. Often F. Sometimes G. Rarely/Never H. Don't Know/N.A.	Yes No Don't know/Unsure
Opportunity to Transfer	Q. 13, Section 2, Part j. HOW SATISFIED you are with the services – Transfer credit assistance	Satisfaction E. Very F. Somewhat G. Not at all H. N.A	Yes No Don't know/Unsure
Opportunity to Transfer	Q. 13, Section 3, Part j. HOW IMPORTANT the services are to you at this college – Transfer credit assistance	Importance D. Very E. Somewhat F. Not at all	Yes No Don't know/Unsure
Opportunity to Transfer	Q. 14. How likely is it that the following issues would cause you to withdraw from class or from this college e. Transfer to a 4-year college or university	E. Very Likely F. Likely G. Somewhat likely H. Not likely	Yes No Don't know/Unsure

Appendix B.
Institutional Review Board Approval



VITA

Kristen Alley was born in West Point, NE on November 11, 1969. Kristen grew up in Omaha, Nebraska and graduated from Millard South High School in 1988. In 1992, she completed her Bachelor of Arts degree in Psychology at the University of Nebraska-Lincoln. In 1997, she completed her Master of Arts degree in Higher Education Administration at the University of Missouri-Columbia and went on to complete her Doctorate of Education in Educational Leadership and Policy Analysis also from the University of Missouri-Columbia.

Kristen's professional experience includes several positions in Residential Life, Campus Activities, and various other areas in higher education. She has served in leadership capacities in several professional organizations, including UMR-ACUHO, MOCPA, ACPA and MCCA. Currently, she serves as the Dean of Student Services at North Central Missouri College in Trenton, MO, where she resides with her husband Roger.