AN ABSTRACT OF THE DISSERTATION OF

James A. Mendoza for the degree of Doctor of Philosophy in Education presented on December 8, 2014.

Title: The Influence of Participating in a Mandatory Mixed-Format Student Success Seminar on Persistence in an Urban Community College

Abstract approved: _____

Larry D. Roper

Over the past twenty years, the national three-year graduation rate for community college students has ranged from 44% to roughly 31% in 2013 (NCES, 2013). As a way to address such low graduation rates, colleges have implemented a myriad of services and programs (i.e., tutoring, mentoring, etc.). Another intervention is the student success seminar. Student success seminars are courses that teach basic college success skills, transitioning to college, and campus resources.

The purpose of this study is to explore the influence of participating in a student success seminar on academic performance, persistence, and graduation rates in a community college. Factors considered in this research include: (a) age, (b) gender, (c) ethnicity, (d) enrollment status, (e) degree intent, (f) high school performance, (g) grade point average, (h) credit hour completions, (i) persistence, and (j) graduation rates.

The population of students used for this research was all first-time in college students who were assessed into developmental English. The students were divided into two groups

based on participating in student success seminar or non-participation in the seminar during their first term of college. Both unpaired t-test and chi-square analyses were used to evaluate the existence and strength of the relationships between each of the independent variables and the dependent variables.

Findings from this study indicate that participating in student success seminar had a statistically significant positive relationship to persistence to the third year of college. Additionally, findings reveal a statistically significant positive relationship for participants graduating in two years. The study examined the differential impact of student success seminar participation for subgroups of students. Some differences were revealed; however, results were inconsistent across terms of the study.

The Influence of Participating in a Mandatory Mixed-Format Student Success Seminar on Persistence in an Urban Community College

by

James A. Mendoza

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APPROVED:

Major Professor, representing Education

Dean of the College of Education

Dean of the Graduate School

I understand that my dissertation will become part of the permanent collection of Oregon State University libraries. My signature below authorizes release of my dissertation to any reader upon request.

James A. Mendoza, Author

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The Influence of Participating in a Mandatory Mixed-Format Student Success Seminar on Persistence in an Urban Community College

James A. Mendoza

Chapter 1: Focus and Significance

To maintain the United States' competitive economic edge, its workforce must have education and training beyond high school, and postsecondary institutions must attract and retain a growing number of students. Although access to, and participation in, postsecondary education have increased, the need to enhance persistence for students in American colleges and universities, so more of its students are prepared for the challenges of a dynamic and ever-expanding workplace, is still a critical issue. Even after 20 years, it is still the case that roughly six of every 10 students who begin college do not complete either a two- or four-year degree within six years of entry (NCES, 2012).

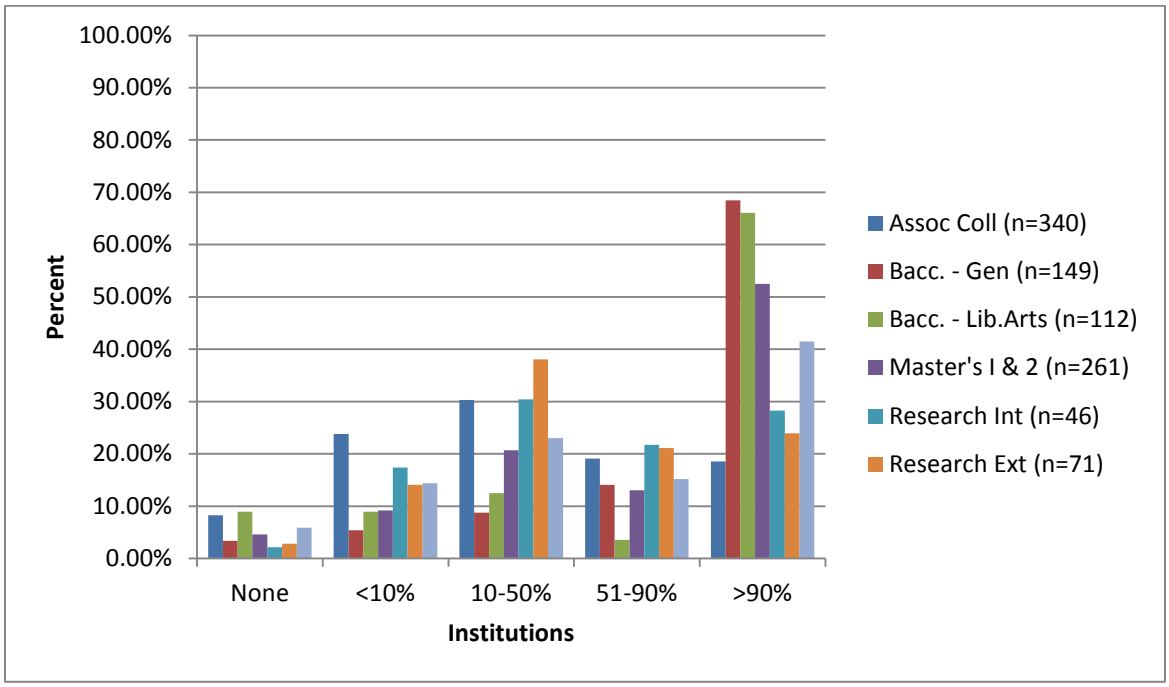
College services and programs such as orientation, tutoring, advising, mentoring, and student life, are meant to increase student engagement and success in college which in turn contribute to increased persistence to graduation (Astin, 1984; Crissman & Upcraft, 2005; Habley, 2004; Pascarella & Terenzini, 2005; Tinto, 1993). Another resource for students is the student success seminar. Student success seminars are courses that teach basic college success skills, transitioning to college, and campus resources (Derby & Smith, 2004). Many colleges across the country are adopting student success seminars as a way to increase student persistence. Findings from the Second National Survey of First-Year Academic Practices show that out of 1,000 U.S. institutions responding, 94.1% indicate they offer a student success seminar (see Table 1) (Barefoot, 2002). While baccalaureate (65%>) and masters (52%>) institutions are most likely to offer "required" versions of student success seminar, two-year

colleges (18%>) and research extensive universities (23%>) most frequently report that “a few” or “some” students participate in student success seminar. With student persistence being a major issue in higher education and studies correlating enrollment in a student success seminar with increased persistence (Barefoot & Gardner, 1993; Porter & Swing, 2006; Stovall, 1999; Zeidenberg et. al., 2007), community colleges may want to consider making the student success seminar a larger part of college culture. Student success seminar may be one intervention institutions can utilize in addressing money lost due to attrition.

I have found that working as a community college counselor and coordinator of student success seminar, one of the biggest barriers I see students, more specifically developmental students, is transitioning to college. The adjustment to college culture and expectations is intimidating, oftentimes influencing students in their decision to “drop-out”. Students’ repeatedly report satisfaction with the information and skills learned in student success seminar. Student success seminar helps students feel more comfortable with their environment and better prepared academically.

Table 1

First-Year Seminars – Percentage of Students Involved by Carnegie Classification of Higher Education Institutions



Source: Policy Center on the First Year of College Website. Second National Survey of First-Year Academic Practices 2002. Retrieved February 19, 2008 from http://www.firstyear.org/survey/survey2002/findings.html

Research Purpose and Questions

The purpose of this study is to examine the influence of participating in a mandatory mixed-format student success seminar on academic performance, persistence, graduation in an urban community college. The study will examine whether or not student success seminar participants, when compared to nonparticipants, earn higher grades, complete more of their credits, enroll for more terms, and graduate at higher rates during a four-year period following initial college enrollment. This study will also explore the possibility that the student success seminar impacts the performance, persistence, and graduation of specific subgroups of students differently. The following five research questions guided this study:

1. How did participation in a community college student success seminar influence grade point averages compared to nonparticipants?
2. How did participation in a community college student success seminar influence the number of credit hours earned compared to nonparticipants?
3. How did participation in a community college student success seminar influence student persistence compared to nonparticipants?
4. How did participation in a community college student success seminar influence graduation rates compared to nonparticipants?
5. How did participation in a community college student success seminar influence grade point average, course completion, persistence, and graduation differently for subgroups of students identified according to age, gender, ethnicity, high school performance, initial enrollment status, and degree intent?

Significance of the Study

This research study, on the influence of participating in a mandatory mixed-format student success seminar on persistence in an urban community college, has significance to the academic community for four reasons: (a) low rates of persistence; (b) loss of benefits to student and community; (c) loss of resources to college; and (d) gap in research on the student success seminar.

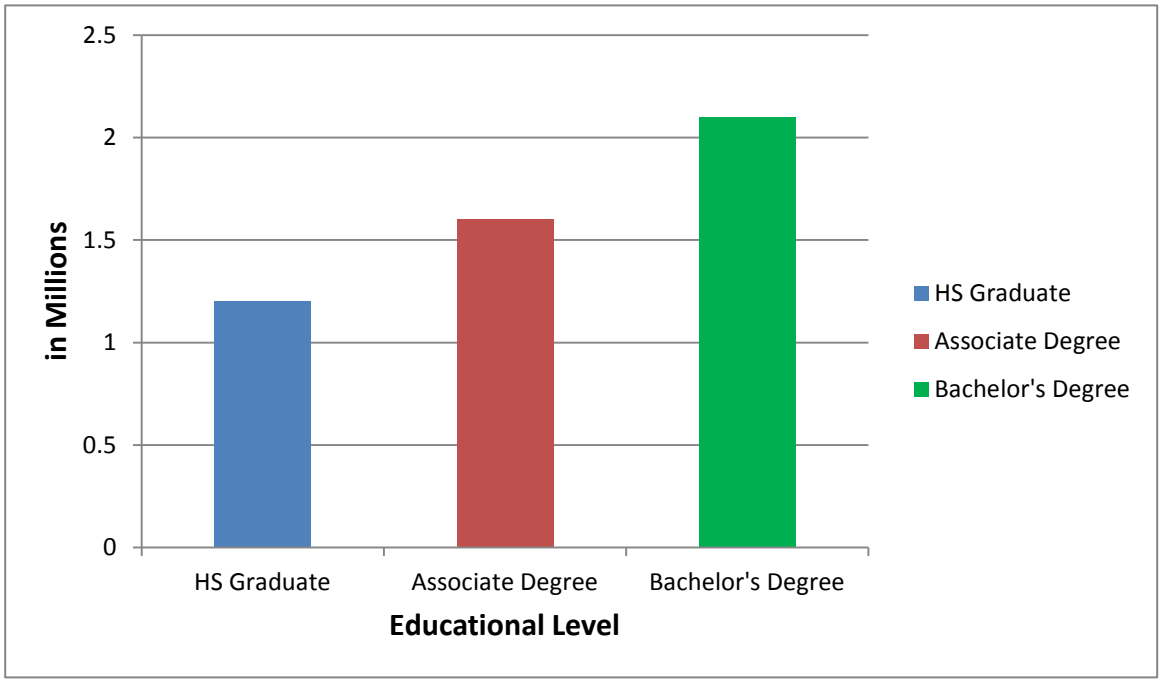
Low Rates of Persistence. Academic institutions must address and be accountable for low rates of persistence. In fall 2005, there were over six million full- and part-time students enrolled at public two-year colleges in the United States (Knapp, Kelly-Reid, Whitmore, & Miller, 2007). Findings from American College Testing's (ACT) annual survey of nearly 2,100 two- and four-year postsecondary institutions indicate a national first to second year retention

rate of 54.9% at public two-year colleges (ACT, 2014). Additionally, the past 20 years indicates that three-year graduation rates for two-year institutions have ranged from a high of 44% in 1989 to a low and current rate of 21.9% (ACT, 2014). There is much we need to do to effectively translate what is known from research and theory on student persistence into knowledge that will guide actions on behalf of student persistence (Tinto, 1993).

Loss of Benefits to Student and Community. The credibility of academic institutions and benefits to students and society depend upon colleges' ability to assist students in earning a certificate and/or degree. Persistence is an institutional performance indicator. In this context, the corollary means that student persistence is the primary gauge for collectively assessing the success of students, and therefore of an institution. The benefits that accrue to both society and the individual as a result of successively higher levels of education are well documented (see Table 2). In terms of lifetime earnings, high school graduates earn an average of $1.2 million; associate's degree holders earn about $1.6 million; and bachelor's degree holders earn about $2.1 million (Day and Newburger, 2002).

Table 2

Lifetime Earnings by Educational Level



A study conducted by the Kentucky Long Term Policy Research Center (Watts, 2001) identified a number of social benefits, both individual and public, that accrue as a result of those who attain successively higher levels of education. These included,

> …decreased reliance on public assistance, increased tax revenues, lower demands on the criminal justice system, greater civic participation, better health status through improved lifestyle choices, improved parenting skills, increased entrepreneurial activity, and increased access to and use of computers and the Internet. (p. 9)

In 2007, the American Association of Community Colleges (AACC) identified student development as one of a series of "hot issues" for community colleges in the United States. Students that drop-out of college fail to develop essential critical-thinking skills, contribute less to society, lack preparation for the world of work, are less tolerant of individual differences, and lack an appreciation for lifelong learning opportunities. Institutions that fail to retain students

not only feel the drain of lost revenue, but may also face decreasing support from the public, ultimately contributing to lower enrollments (Swing & Skipper, 2007).

Loss of Resources to College. Community college funding is often dependent upon enrollment. In recent years, an emphasis has been placed on the cost to colleges of not meeting goals to provide the best social, academic, and other experiences for students. The costs to institutions of student attrition are several, including "…loss of future tuition and fees, loss of faculty lines, and increased recruitment costs" (Habley, 2004). For example, in fall 2005 Washington State Community and Technical Colleges (WSCTC's) had 150,584 full-time equivalencies (FTE's). Given an average retention rate of roughly fifty percent and the average state dollar per FTE at just around $8,600, WSCTC's could have potentially generated over $100 million more in revenue if they had increased fall to fall retention by just ten percent (see Appendix A). Looking at the funding picture on a national level, the National Center for Educational Statistics shows in fall 2005, there were over six million students enrolled in public two-year colleges. With a national retention in public two-year colleges at just over fifty percent and an average fund per FTE for all public postsecondary institutions at roughly $10,000, the revenue lost by two-year colleges was in the billions.

Another concern is that enrollment has increased steadily over the past 20 years and public post-secondary institutions as a whole have become more state-assisted than state supported, necessitating an increased reliance on tuition and fees. The resources (e.g., student services and instruction) expended to accommodate higher enrollments without commensurate funding by the state further exacerbates revenue loss. Institutions that put students' first will succeed, even excel, just as their students will (Levitz, Noel, & Richter, 1999).

Gap in Research on the Student Success Seminar. "Student success seminars exist at almost three-quarters of accredited undergraduate degree-granting institutions in the United States and are becoming more institutionalized on individual campuses" (Hunter & Linder, 2005, p. 288). Research has shown that participation in a student success seminar has led to increased short-term persistence, increased GPA, improved peer connections, increased student satisfaction with their institution, increased use of campus resources, and increased out-of-class faculty/student interactions (Barefoot & Gardner, 1993; Belcher, Ingold, & Lombard, 1987; Cuseo, 1991; Cuseo & Barefoot, 1996; Donnangelo & SantaRita, 1982; Glass & Garrett, 1995, Florida Department of Education, 2006; Grudner & Hellmich, 1996; Smacchi, 1991; Stovall, 1999; Walls, 1996; Zeidenberg, Jenkins, & Calcagno, 2007). In as much as short-term academic performance and persistence are positive outcomes; they do not guarantee long-term academic performance and persistence or even graduation. Currently there is a lack of research available to the academic community about the influence of participating in a mandatory mixed-format student success seminar on long-term academic performance and persistence in the community college. Stovall (1999) suggests that in order to learn what impact a student success seminar has on long-term academic performance and persistence, more research is needed.

In order to estimate the true impact of a student success seminar, the influence on academic performance and persistence that is attributable to actual participation (versus nonparticipation) in the seminar must be separated from the influence of the individual characteristics of students (i.e., pre-college characteristics) (Astin, 1993; Bean 1990; Dietschel, 1995; Goodman & Pascarella, 2006; Pascarella & Terenzini, 1998). "The consideration of input characteristics when assessing student retention helps to understand the influence of students' backgrounds and characteristics on their ability to persist" (Crissman & Upcraft, 2005, p. 30).

The existing body of research has been discernibly weaker in accounting for pre-college characteristics. Only a few studies have considered the differential impacts of student success seminars on subgroups of students (Belcher et al., 1987; Reis, 1989; Rudman, 1992; Stovall, 1999; Zeidenberg et. al., 2007).

Summary

The Secretary of Education has declared a need to enhance student persistence in U.S. colleges and universities as many students drop out of college prior to fulfilling a certificate and/or degree. There are a number of resources and services colleges provide to students to help them persist and succeed. One such intervention is the student success seminar; over 90% of colleges and universities offer a student success seminar. Student success seminars are designed to help students transition to college, familiarize them about college resources, and teach basic college success skills such as time management, test taking, and other valuable academic skills. Student success seminars have also been shown to increase student persistence (Barefoot & Gardner, 1993; Crissman & Upcraft, 2005; Gardner, 1986; Hunter & Linder, 2005; Schnell & Doetkott, 2003; Stovall, 1999; Zeidenberg et. al., 2007). While a majority of colleges and universities offer a student success seminar, two-year colleges have been identified as least likely to offer student success seminars where in a majority of their students are required to enroll (Barefoot, 2002).

In as much as there is research confirming increased short and long-term academic performance and persistence for students completing a student success seminar, only 43.4% (N=491) of colleges and universities who conduct formal program evaluations indicate increased student persistence from fall to fall terms and only 17.6% report improved grade point averages (National Resource Center, 2007). This indicates that some seminar programs are more effective

than others. Therefore, the question remains: if the majority (>70%) of student success seminars are of the transition theme format and no better than half reflect successful persistence from fall to fall terms, then it is possible that other Seminar types (e.g., mixed format) could be more effective in increasing both short and long-term academic performance and persistence in a community college. Determining the influence of participating in a mandatory mixed-format student success seminar on persistence in an urban community college will help faculty and administration in their efforts to design student success seminars that will maximize persistence at their institutions. In order to examine this issue, the purpose of this study is to identify the influence of participating in a mandatory mixed-format student success seminar on academic performance, persistence, and graduation in an urban community college. With this purpose in mind, this study addressed the following five research questions: 1) How did participation in a community college student success seminar influence grade point averages compared to nonparticipants?, 2) How did participation in a community college student success seminar influence the number of credit hours earned compared to nonparticipants?, 3) How did participation in a community college student success seminar influence student persistence compared to nonparticipants?, 4) How did participation in a community college student success seminar influence graduation rates compared to nonparticipants?, and 5) How did participation in a community college student success seminar influence grade point average, credit hours earned, persistence, and graduation differently for subgroups of students identified according to age, gender, ethnicity, initial enrollment status, high school performance, and degree intent? Lastly, there are four reasons this study is significant to the academic community: (a) low rates of persistence, (b) loss of benefits to students and community, (c) loss of resources to the college, and (d) gap in research on the student success seminar.

Chapter 2: Review of Literature

The purpose of this section is to provide a context for exploring the influence of participating in a mandatory mixed-format student success seminar on academic performance, persistence, and graduation in an urban community college. Following a brief description of the literature search process and definitions of key concepts, literature in the following areas is reviewed:

(1) *Student Success Seminars*: Information on the history of the student success seminar was reviewed. This section includes information on the history of the student success seminar as well as the types and characteristics of the student success seminar most prevalent in higher education. The purpose of this section is to provide contextual and background information for the study.

(2) *Theories of Student Attrition*: Literature on student departure from college was reviewed. This section includes: Tinto's (1975) Student Integration Model; Bean's (1980) Model of Student Departure; Astin's (1984) Student Involvement Theory; and Pascarella's (1985) General Causal Model. This information provides multiple frameworks for exploring why students' drop-out of college.

(3) P*ersistence and Student Success Seminars*: Studies on the impact student success seminars have on academic performance and persistence was reviewed. The purpose of this information is to provide a context for the relationship between the student success seminar and academic performance and persistence. In addition, to identify the strengths and weaknesses of identified studies in order to assess the gap in the current literature regarding student success seminars and persistence.

(4) *Other Variables:* Literature on the influence student characteristics have on student academic performance and persistence to graduation was examined. The purpose of this information is to ascertain how student characteristics, such as age, gender, initial enrollment status, ethnicity, high school experience, and degree intent, effect student success outcomes.

Literature Search

The purpose of this section is to identify the resources utilized that ultimately supported the nature of this study as to the influence of participating in a mixed-format student success seminar on academic performance and persistence in an urban community college. The section is organized into two subsections: (a) search process; and (b) selection process.

Search Process

The Oregon State University (OSU) online library, The National Resource Center for the First-Year Experience and Students in Transition website, Office of Community College and Leadership website, Community College Research Center website, and the National Center for Education Statistics website were utilized in searching for both quantitative and qualitative studies that discussed the correlation between student success seminars and retention, persistence, and student success. The OSU Research Databases were utilized, to include Academic Search Premier, EBSCOhost, ERIC (EBSCOhost), ERIC (FirstSearch), and OASIS – OSU libraries online catalog as search tools. Special focus was placed on the *Journal for the First-Year Experience and Students in Transition*, a publication from the University of South Carolina, National Resource Center for the First-Year Experience and Students in Transition because of the specific focus on the first-year experience, to include student success seminars.

Selection Process

Priority was placed on more recent studies emphasizing research completed within five years. Research over 10-20 years old was referenced if it was more timeless or helped establish a historical context, for example, Tinto's (1975) student integration model. A variety of key word searches were utilized such as: "first-year retention," "student success seminars," "first-year experience," "student development," "student attrition," "teaching and learning," "student engagement," and "persistence." Research provided considerable data on student success seminars, as it has been reported that student success seminars have become the most studied higher education innovation (Barefoot, Warnock, Dickinson, Richardson, & Roberts, 1998).

Research studies and/or journal articles that focused on two- and four-year private and highly selective institutions were not selected for the review as the population of students served by these institutions is most dissimilar to the population that public community colleges serve. The review of literature focused specifically on student success seminars as a student support intervention. Research conducted at four-year public colleges and universities was only included if it was directly related to student success seminar and persistence. Any study that was specific to the purpose of this study was also included. A substantial amount of research related to student success seminars has focused on four-year institutions. This data may still apply to the community college.

Key Concepts

The purpose of this section is to identify and describe key concepts utilized in the existing literature related to the student success seminar. These concepts were selected because existing research uses more than one term to explain the same thing and many practitioners and

researchers tend to have different definitions and uses of these concepts. For the purposes of this research, the following terms are defined accordingly:

- *First-year experience*: refers to the student experience in and outside the classroom during the first college year. It involves programs and services for students that contribute to their student status and success. For example, assessment, counseling, advising, admissions, and career center.
- *Retention*: an institution's ability to keep students enrolled from one quarter to the next. Student retention does not imply student success however; hypothetically a student can be retained from term to term that does not successfully pass courses enrolled.
- *Persistence*: patterns of student enrollment over time leading to the completion of a certificate and/or degree. Persistence is a students' ability to persist from fall to fall and attain at least 45 quarterly credits or 30 semester credits.
- *Cohort*: a group of individuals who have common characteristics.
- *Longitudinal*: multiple observations of the same individuals over a long period of time.
- *Attrition*: the act of a student dropping out of college before reaching their personal, academic, and/or career goal.
- *Student success seminars*: also called freshman seminar, freshman orientation, first year experience, student life skills, introduction to college, college success, and many more. These are courses that typically teach students college survival skills, transitioning from high school or post-high school to college, college resources, and

academic skills. Student success seminars are considered a component of the first-year experience.

- *Student success*: the extent to which a student passes all the courses they are enrolled with a grade of "C" or higher.
- *Student success seminar participant*: A student that is enrolled in college for the first time, placed in developmental English, and completes a student success seminar during the first quarter of college enrollment.
- *Student success seminar nonparticipant*: A student that is enrolled in college for the first time, placed in developmental English, and who does not enroll in a student success seminar.

Student Success Seminars

John Gardner wrote, "A movement is taking place in American higher education to change the way colleges and universities treat, welcome, assimilate, support, and most importantly, inform their freshman students in this new dawning age of information" (1986, p. 261). The movement to which Gardner refers is the resurgence of interest and use of the student success seminar; a resurgence that has developed into the first-year experience phenomenon. The purpose of this section of the review of literature is to provide a context for understanding the various types and characteristics of student success seminars offered by colleges in the United States. This section includes information on: (a) history of the student success seminar, (b) types and characteristics of the student success seminar currently being offered in the United States, and (c) prevalence of student success seminar at various types of institutions.

History

The purpose of this section is to introduce how the student success seminar developed over time to its current status in higher education. Student success seminars have experienced both an increase and decrease in growth, over the years from a quick rise in popularity upon first inception, to being nearly obsolete, and once again gaining increasing interest among educators. The curriculum has undergone various changes based on what instructors and administrators believe students need during the first year of college.

Since the time of the medieval university, students have wrestled with adjustment issues during their first year of college (Dwyer, 1989). From finding a place to live, to their initiation into a society of scholars, to the selection of a master to help with their development of programs of study, students experienced many obstacles in order to begin their education (Dwyer, 1989).

In 19th century American higher education, freshmen had to work hard to become a part of the social and academic fabric of their institutions. Oftentimes, compliance with the social hierarchy within college called for meeting the menial demands of upperclassmen such as washing and pressing clothes, fetching food and drink from taverns, or taking notes from building to building (Dwyer, 1989). As a result of trying to meet these social demands, the academic performance of freshmen often suffered (Dwyer, 1989). Because of the challenges that freshmen faced, various measures were taken by institutions to alleviate these social and academic pressures.

One measure taken to alleviate the social and academic pressures on freshmen was the development of tutors. Tutors were graduate students who befriended freshmen and assisted them through their transition to college (Dwyer, 1989). Other measures included an increased faculty and student interaction, the development of freshman dormitories, as well as the

development of advising systems (Dwyer, 1989; Gordon, 1989). As institutions of higher education became more sophisticated, so did the methods by which students were assisted in making an effective transition into the college environment. Continued efforts to assist freshmen eventually led to the development of the orientation course.

In 1882, Lee College in Kentucky established the first orientation course, Boston University followed in 1888, and Iowa State College in 1900 (Barefoot & Fidler, 1996; Fitts & Swift, 1928; Gardner, 1986; Gordon, 1989). In 1911-12, Reed College, Portland, Oregon offered the first orientation course for credit and by 1926, there were 82 colleges that offered orientation courses for credit (Fitts & Swift, 1928). If non-credit orientation classes are added, there would be over 100 four-year colleges and universities that offered orientation courses (Fitts & Swift, 1928; Schnell & Doetkott, 2003). By 1930 it was estimated that one-third of the colleges and universities in the United States were offering such courses, and by 1938 nine out of ten freshman in these colleges were required to take them (Mueller, 1961). During the 1950's approximately 60% of all colleges offered orientation courses (Drake, 1966). However, as these courses became popular, so did the objections to the courses by faculty who believed that the focus of these courses was simply on life adjustment (Caple, 1964). Due to faculty objections that they were not academic enough in content, extended orientation courses declined; and by the late 1960's is was estimated that less than 15% of all colleges offered orientation courses (Drake 1966; Gordon, 1989).

The 1970's brought an increased and more diverse population of students to American college campuses. Students who entered colleges and universities during the late 1960's and early seventies included those who traditionally had not aspired to attend college. These students included blue-collar white males, ethnic minorities, women, and first generation students (Cross,

1971). Many of these students were viewed as low academic achievers, needing additional assistance because they represented the lowest third of their cohorts based on the results of nationally administered examinations. Cross (1971) believed that these students' low achievement resulted from a fear of failure that developed during their elementary and secondary school experiences. So as these students began entering higher education, many educators, including Chickering (1969) and Cross (1971), called for the development of programs and services that would effectively assist new students to succeed in college.

Out of the early orientation models, other extended orientations developed called freshman seminars or student success seminars (Gordan, 1989). A major factor that influenced the change from orientation to seminar was that seminar was considered academically more rigorous than the orientation which was commonly perceived as a life management class, lacking academically. Table 3 provides an illustration of the differences in content between orientation courses and seminars.

Table 3

Differences in Content Between Orientation and Seminar Courses

Orientation Courses	Seminar Courses
• Identify the differences between high school and college. • Learn college survival skills. • Learn time-management and study skills. • Learn college regulations, deadlines, and procedures. • Understand their health needs, including alcohol and drug abuse as well as human sexuality. • Become aware of their learning styles and their applications. • Identify and clarify their values. • Learn stress and conflict management. • Learn the principles of career development and decision making.	• The value and benefit of higher education. • How to think and learn. • The nature of educational processes and the role and responses of students in these processes. • Cognitive, writing, communication, and library skills. • The curriculum, including general and major requirements. • Students' learning styles and how to apply this knowledge in and out of the classroom. • Critical reasoning and problem solving.

Source: Adapted from Gordon, V. G. (1989). Origins and purposes of the freshman seminar. In M. L. Upcraft, J. N. Gardner & Associates (Eds.), *The freshman year experience: Helping students survive and succeed in college.* San Francisco: Jossey-Bass.

During the seventies, many educators advocated on behalf of new programs for students. Institutions began developing Seminars to assist students in making successful transitions into college (Felker, 1973; O'Banion, 1969). One notable course was University 101, which was developed in 1972 at the University of South Carolina (Gardner, 1986; Shanley & Witten, 1990). The Human Development 101 Student Success Seminar (see Appendix B) examined in this study is modeled from student success courses such as University 101. Since the University of

South Carolina's University 101 course, student success seminars have grown increasingly. Today, over 90% of colleges in the United States offer such a course (National Resource Center, 2012).

The popularity of the student success seminar has grown for several reasons. First, higher education has become egalitarian (Cross, 1971). As opposed to a higher education system that was available to only those students of a certain socioeconomic status and/or academic merit, institutions began opening their doors to any student who wanted to pursue an education beyond a high school diploma and had the resources to pay for it (Cross, 1971; Gordon & Grites, 1984). In addition to more students from diverse backgrounds being admitted to postsecondary education, colleges became more complex with academic regulations and institutional requirements such as career planning (Cohen & Jody, 1978). Consequently, institutions sought new ways to increase student success. Because the student success seminar provided an overview of institutional resources and explored topics such as the purposes of a higher education, they offered solutions to address the growing diversity and complexity of both the student population and higher education. One direct result of the student success seminar was a positive impact on student retention (Fidler, 1991; Shanley & Witten, 1990; Sidle & Reynolds, 1999). However, the benefits of the student success seminar extended well beyond student retention. Student success seminars have been cited for contributing to the academic and personal development of students (Sidle & McReynolds, 1999; Twale, 1989). In "The Freshman Year Experience" Upcraft and the founder of University 101, Gardner (1989), noted that first-year college students succeed when they work toward fulfilling their educational and personal goals. These goals consist of developing academic and intellectual competence, establishing and maintaining interpersonal relationships, developing an identity, deciding on a career and life-

style, maintaining personal health and wellness, and developing an integrated philosophy on life (Upcraft & Gardner, 1989). Extended orientation courses, such as the student success seminar and other courses, attempt to initiate and facilitate the development of first-year college students so that students can be successful within the institution as well as in life. Despite existing findings demonstrating the benefits of the student success seminar on retention, as well as student academic and personal development, most of these studies only address four-year colleges and universities and not the two-year college. In addition, these studies fail to identify the extent of any relationship between student characteristics (i.e., age, gender, and ethnicity) and the student success seminar. Lastly, these studies do not ascertain what type of student success seminar was used to produce the given results. The current study will attempt to add to any existing literature on the student success seminar in community colleges as well as any relationship between student characteristics and the Seminar.

Summary

The recognition that new students needed additional support in making the transition to college occurred as early as the late 19th century with Lee College in Kentucky. Since then, American colleges and universities have implemented a variety of support interventions to help assist new students adjust to college such as extended orientation courses. Out of these early orientation models, other extended orientations developed called freshman seminars. A large factor influencing the change to seminar was that it was considered more academically rigorous and would generate greater respect in the academic community. Some of the general differences between an extended orientation course and the seminar course were that orientation courses focused more on student understanding of college rules and regulations, policies, and who students are and what they value. The seminar courses focused more on the value of higher

education, the process of thinking, learning styles, critical thinking, and how to study. One notable seminar course is University 101 at the University of South Carolina. Since the 1970's, this course has consistently been shown to increase student retention for students that enroll in it. Since the 1970's, colleges and universities have developed their version of a student success seminar course that have not only helped in retaining students but also in contributing to student academic and personal development. Unfortunately, due to the later inception of the community college, much of the literature documenting the influence of an orientation course or seminar course on persistence has mostly been done at four-year colleges and universities. Identifying the influence of participating in a mixed-format student success seminar on persistence in an urban community college will fill a much needed gap in the literature for faculty and administration in the community college sector.

Types and Characteristics

In order to identify the influence of participating in a mandatory mixed-format student success seminar that contribute to academic performance, persistence, and graduation in an urban community college it is necessary to understand what types of seminars, are offered by colleges and universities. Although there may be similarities to some types of seminars there are also clear distinctions. The purpose of this section is to introduce some of the more common types and characteristics of student success seminars in order to provide a framework for understanding what types of seminars are being offered in American colleges and universities, as well as how they are similar and how they differ. The types and characteristics included in this section will first be discussed in reference to Fitts and Swift (1928) and secondly by Porter and Swing, (2006).

Fitts and Swift (1928) grouped orientation courses during 1925-26 into three major types:

- Adjustment to college life: The purpose of this course is to help entering students make adequate adjustments to their new mental and social environments. Over half of four-year colleges and universities offered this type of orientation.
- Introduction to the methodology of thinking and of study: The purpose of this type is to teach students how to think critically, reflectively, and how to study for different disciplines.
- Adjustment to the social and intellectual world of today: The purpose of this course is to orient the student socially and intellectually, to focus attention upon social and moral problems, duties, responsibilities, and relationships of the world today, together with a survey of the most outstanding contributions offered by major fields of knowledge (p. 181).

Porter and Swing (2006), in their study "Understanding How First-Year Seminars Affect Persistence," cluster student success seminars into five types:

- *Transition theme*: This type of student success seminar focuses on topics that ease the transition to college, develop skills needed for academic success, and encourage student engagement in the full range of educational opportunities. The transition theme is the most common format for student success seminars (National Resource Center, 2007).
- *Special academic theme*: This type of student success seminar focuses on interdisciplinary themes other than college transition. While college adjustment and study skills may be included in the course, the majority of assignments and course time is spent exploring a selected topic (e.g., social justice).

- *Discipline themes*: These courses are administered by individual academic departments or units. They may serve as an introduction to a major or discipline. Students are recruited into these courses, at least in part, because of interest in a major related to the course theme (e.g., student success course focusing on health science)
- *Remedial theme*: These courses are offered for students at high risk of dropping out or having low academic success and usually include intensive focus on study skills and life management skills.
- *Mixed format*: These are student success seminars comprising more than one of the themes listed above.

In reviewing the way in which researchers have categorized the various types of student success seminars over the years, there seems to be little general agreement about the basic content of orientation courses (Caple, 1964). Table four conceptualizes the similarities and differences of how student success seminars have been categorized.

Table 4

Types and Characteristics of Student Success Seminars

Authors	**Types and Characteristics**
Fitts & Swift (1928)	Adjustment to College Life: To help entering student s adjust mentally and socially to college culture. Introduction to the Methodology of Thinking and of Study: Centers around the explanation and illustration of the thinking process. Students essentially learn how to think reflectively and how to study. Adjustment to the Social and Intellectual World of Today: It focused on social problems, citizenship, and the study of the nature of the world and humanity. Introduction to fields of study such as philosophy, religion, humanities, and government were often included.
Strang (1951)	Type 1: Personal adjustment and planning in the new college environment. Type 2: Introduction to various fields of knowledge while indicating the unity and interrelations among these fields.
Porter & Swing (2006)	Transition Theme: Focuses on topics that ease the transition to college, develop skills needed for academic success, and encourage student engagement in the full range of educational opportunities. Special Academic Theme: Focuses on interdisciplinary themes for other than college transition.

	Discipline Theme: Courses taught by individual academic departments. Students may take course because of interest in a major related to the course theme (e.g., allied health). Remedial Theme: For students at high risk of dropping out or having low academic success and usually include intensive focus on study skills and life management skills. Mixed Format: Courses that teach content area from more than one type of seminar.[1]

[1] Note: These definitions were developed by Randy Swing, Betsy Barefoot, John Gardner, and Joe Pica. They are an adaptation of definitions used by Betsy Barefoot in the 1991 Survey of First-Year Seminars conducted by the National Resource Center on The First-Year Experience and Students in Transition.

The types and characteristics of student success seminars detailed by Porter and Swing (2006) have similarities to the types grouped by Fitts and Swift (1928). However, the degree of difference between the types of seminars outlined by Porter & Swing and Fitts & Swift also support the contention that any agreement of how to group seminars is extremely difficult. In their study, Porter and Swing (2006) only identified the types of seminars in relationship to four-year colleges and universities. Porter and Swing (2006) do not state whether the transition theme, special academic theme, discipline theme, remedial theme, or mixed format are consistent with the types of seminars offered by two-year colleges. The focus of this study was only on two-year institutions.

In the 2006 National Survey of First-Year Seminar Programming, student-rated effectiveness was measured for each of the five student success seminar types as outlined in the Porter and Swing (2006) study. The findings indicated that the transition theme seminar was most effective in terms of increasing student academic performance and retention; followed closely by the special academic theme. The discipline-based theme seminar was rated least

effective while there was virtually no report on the effectiveness of the remedial theme because no participants in the study employed that type of seminar. The mixed-format seminar was excluded intentionally in the study due to such low percentages of participating colleges reporting the use of this type seminar. The implications for this study are that the five most important topics reported by participants in the 2006 National Survey of First-Year Seminar Programming were based on reports from individuals that experienced one type of seminar, the transition theme. This excludes any opportunity to learn if there are other seminar types that influence academic performance, persistence, and graduation. Being able to identify whether participating in a different type of seminar (e.g., Mixed-Format Type) influences academic performance, persistence, and graduation in an urban community college will fill a gap in the research related to student success seminars.

Summary

Over the past eighty years scholars have attempted to categorize the types of student success seminars offered by American colleges and universities into one comprehensive list. The earliest of these attempts were made by Fitts and Swift (1928) and the most recent categorizing of seminars was made by Betsy Barefoot in the 1991 Survey of First-Year Seminars conducted by the National Resource Center on The First-Year Experience and Students in Transition. Barefoot (1991) categorized student success seminars into five themes: 1) transition theme, 2) special academic theme, 3) discipline theme, 4) remedial theme, and 5) mixed format. These five types are currently the most comprehensive list of seminar types employed today. In addition, they are the types referenced in some of the most current research on student success seminars (Barefoot, 2000, 2002; National Resource Center, 2004, 2007; Porter & Swing, 2006).

Because these five types are referenced most today, this study utilized the same model of seminar types with the focus entirely on the mixed-format student success seminar.

Prevalence

The purpose of this section is to identify the extent to which American colleges and universities are offering student success seminars. Understanding the prevalence of the student success seminar in higher education provides a context for how popular these courses have become in colleges attempt to address low persistence and student success. The lack of prevalence of mixed-format student success seminars in the community college had implications for this study due to the essentially non-existent data related to the mixed-format type of seminar. The following will show the prevalence of seminars in the United States.

In November 2006, the National Resource Center for The First-Year Experience and Students in Transition undertook its seventh National Survey of First-Year Seminar Programming in American higher education. Out of 968 institutions that responded to the survey, 821 institutions reported that they offer a special course for first-year students called a first-year seminar, colloquium, or student success course (National Resource Center, 2007). An earlier study, conducted by the Policy Center on the First Year of College in 2002, had an even higher response rate and reported over 90% of institutions offering a first-year seminar; neither study reported type of seminar utilized.

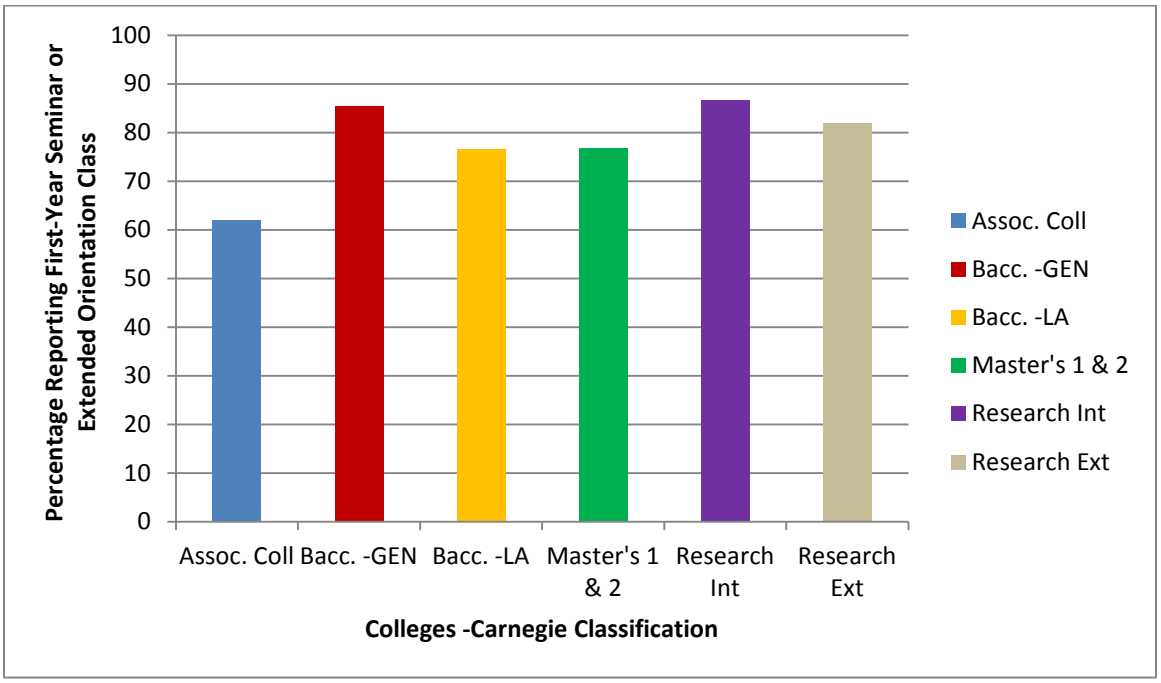
In 2000, The National Survey of First-Year Curricular Practices was administered by the Policy Center on the First Year of College. A web-based curricular survey and a web-based co-curricular survey of 323 out of 586 (i.e., 54%) two- and four-year colleges and universities was utilized. The findings from this survey reported that four-year institutions are more likely than two-year institutions to offer a first-year seminar. Findings were broken down by institutional

type and by Carnegie classification (see Table 5). Again, this survey failed to identify the specific type(s) of seminars offered.

The data revealed in the 2000 National Survey of First-Year Curricular Practices is complimented by later findings obtained in 2006 National Survey of First-Year Seminar Programming in demonstrating a stable trend over the past six years as a lower percentage of two-year colleges offer a seminar than any other type of postsecondary institutions (i.e., Carnegie classified). A lower percentage of two-year institutions offering a seminar, more specifically the mixed-format type, had implications for the site selection of this study.

Table 5

Colleges by Carnegie Classification Reporting First-Year Seminar or Extended Orientation Classes



Policy Center on the First Year of College Website. First National Survey of First-Year Academic Practices 2000. Retrieved February 19, 2008 from http://www.firstyear.org/survey/survey2000/findings.html

Summary

From the medieval university through today, freshmen have faced many adjustment issues in college. Because of the many issues students had to face, American colleges have consistently attempted to address the problem of adjustment for freshmen that would contribute toward their academic success in college. One attempt to address this situation was the development of the extended orientation course. The first extended orientation course was developed at Boston University in 1888 with the first extended orientation course for credit being offered at Reed College in 1911. The popularity of such courses grew during the early 20th century whereby more than one-third of the colleges and universities offered such courses. However, the popularity of such courses eventually declined until the mid-to-late 1960s when higher education began to change. During the mid-to-late 1960s higher education changed in several areas. During this period, higher education became egalitarian, opening its doors to students from all backgrounds and those who had not previously aspired or had been allowed to attend college. In addition, academic regulations and institutional requirements had become more complex. Because of these changes, as well as changes within the student culture whereby peers were no longer seen as viable sources to assist freshmen with adapting to their new environment, extended orientation courses re-emerged as a way to assist students with their adjustments to the college environment.

Debate has continued around what resources to provide students during their first year of college; student success seminars not to be excluded. As with any course, faculty that teach student success seminars develop and teach curriculum that will expand the academic and personal development of students while also supporting them in persisting to their academic objective(s). Existing data appear to support the claim that student success seminars have

become a nearly ubiquitous component of American higher education (Gardner, 1986); yet two-year colleges offer the lowest percentage of seminars at just over sixty-percent.

There are various types and characteristics (e.g., transition theme, special academic theme, discipline theme, remedial theme, and mixed format) of student success seminars currently offered across the country. However, all of the previous studies on student success seminars and persistence have either focused on the transition theme seminar or fail to identify the type of seminar altogether. As a result of this gap in literature, the proposed study focused on the mixed-format theme seminar in an urban community college.

Theories of Student Attrition

The purpose of this section of the review of literature is to collect and describe theories of student attrition in order to provide a context for why students drop out of college. Many of the discussed theories have been referenced and/or modified in developing new theories, as well being a theoretical framework for educators in designing programs and services, that help support and address first-year students' needs; for example, student success seminar. Four theories of student attrition were included because they represent some of the most important theories in persistence studies. This section is organized in the following order: (a) Tinto's Student Integration Model, (b) Bean's Model of Student Departure, (c) Astin's Developmental Theory of Student Involvement, and (d) Pascarella's General Causal Model.

Tinto's Student Integration Model

One of the most widely known and referenced theories of student attrition is Tinto's (1975) student integration model. He linked this multivariate model in part to Durkheim's (1950) suicide model, that the social and academic integration of students increases their institutional commitment, ultimately reducing the likelihood of student attrition. Later, Tinto

(1993) hypothesized that commitment to occupational and educational goals and commitment to the institution in which one enrolls significantly influence college performance and persistence. The stronger the goal and institutional commitment the more likely the student will graduate. Tinto (1993) also recognized that different groups of students (i.e., at-risk, adult, honors, and transfer) had distinctly different circumstances requiring group-specific retention policies and programs. In addition, he reasoned that different types of postsecondary institutions (i.e., nonresidential, two-year, urban, and large public) also required different types of retention policies and programs. Given the unique and varied needs of the community college student, perhaps there are certain types of student success seminars most beneficial to the persistence of the various populations community colleges serve; one of the key questions guiding this study were student characteristics. Therefore, the design of this study took into account variables such as student characteristics (i.e., age, gender, ethnicity) in order to identify if there is any relationship between other key variables and short and long-term academic performance and persistence. Tinto's model has been revised or enhanced by other researchers (Bean, 1980) that used important aspects of his academic and social integration theory to develop a psychological, rather than sociological, model. If Tinto's student integration model is accurate, there may be evidence in favor of seminar types (e.g., mixed-format) that increase persistence based on a curriculum that integrates students both academically (e.g., active learning, learning communities) and socially to the college (e.g., student clubs, campus events).

Bean's Model of Student Departure

Bean (1980) developed the model of student departure, a psychological processes model, to explain the factors contributing to student attrition. This model was an adaptation of an organizational turnover model, which was developed to explain employee turnover in work

organizations. Bean's (1980) model posited that background characteristics of students must be taken into account in order to understand their interactions within the environment of the educational institution. Objective measures, such as grade point average or belonging to campus organizations, as well as subjective measures, such as the practical value of education and the quality of the institution, were variables expected to influence the degree to which the student is satisfied with the educational institution. A student's level of satisfaction is expected to increase the level of institutional commitment. The extent of institutional commitment is seen as leading to a degree or the likelihood that a student will drop out. In a subsequent study, Bean (1985) proposed a revised model and found, in the empirical study of the model, that a student's peers are more important agents of socialization than is informal faculty contact, students may play a more active role in their socialization than previously thought, and college grades seem more the product of selection of peer group than socialization. If Bean's Model of Student Departure is accurate, then there should be a noticeable relationship between student characteristics and completing the student success seminar toward persistence. Again, understanding the relationship between student characteristics and the influence of participating in a mixed-format student success seminar that contribute to academic performance and persistence is one of the questions guiding this study. As a result, the research analysis section of this study controlled for student characteristics (e.g., age, gender, ethnicity).

Astin's Developmental Theory of Student Involvement

Astin's (1984) developmental theory of student involvement was constructed as a link between the variables emphasized in traditional pedagogical theories and the learning outcomes desired by the student and the professor. This theory was based on the findings of Astin's early work and was designed to identify factors in the college environment that significantly affect the

student's persistence in college. Astin (1993) later conducted an empirical study of the model. Using longitudinal data collected by the Higher Education Research Institute (HERI) at the University of California, Los Angeles in its annual survey of freshmen, Astin found that the three most important forms of student involvement were academic involvement, involvement with faculty, and involvement with student peer groups. The empirical findings from this study warrant the following general conclusion: "The student's peer group is the single most potent source of influence on growth and development during the undergraduate years" (Astin, 1993, p. 398).

Only four-year colleges and universities were used in the HERI study. Community college students may identify three different forms of student involvement. If the level of student involvement in college effects student persistence (Astin, 1984), then one key factor in student success seminars that increase persistence in the community college may be the curriculum of certain types (e.g., mixed-format) of seminars; in other words, curriculum that involves students more in and out of the classroom. Tinto (1997) suggests that community college students' primary connection to other students is within the classroom because most campuses are commuter. Similar to Bean (1980) and Tinto's (1975) findings, Astin found student peer groups as highly influential to students making connections with the college ultimately influencing increased persistence or dropping out. Again, as with Bean (1980) and Tinto (1975), if Astin's developmental theory of student involvement is correct, then there should be findings showing particular elements of student success seminars that involve students academically, with faculty, and with peers increase student persistence. Student success seminars that do this theoretically should make certain seminar types more effective than others in increasing student persistence.

Pascarella's General Causal Model

Pascarella (1985) developed a general causal model. In this model, student background/pre-college traits and structural/organizational characteristics of institutions directly impact the college environment. Quality of student effort, student background/precollege traits, and interactions with agents of socialization directly influence learning and cognitive development. Pascarella and Terenzini (1991), in their review of findings and insights from studies conducted over a 20 year period, concluded: "the greater the student's involvement or engagement in academic work or in the academic experience of college, the greater his or her level of knowledge acquisition and general cognitive development" (p. 616). Pascarella and Terenzini's (1991) findings support both Bean (1980) and Tinto's (1975) theories stating that student and institutional characteristics have an influence on student persistence. In addition, Pascarella and Terenzini's (1991) findings also support Tinto (1975, 1993) and Astin's (1984) work on the importance of involving students both in and out of the classroom. The results of the 2006 National Survey of First-Year Programming further support this reporting that student success seminars increase out-of-class faculty/student interaction (National Resource Center, 2007). Evidence suggests that certain student success seminar types could lead to greater student engagement, knowledge acquisition, cognitive development, and psychosocial change. Key to this research study is the reiteration of Pascarella and Terenzini's (1991) findings on the influence of variables such as student and institutional characteristics toward persistence. Student characteristics and institutional characteristics were considered as variables that may potentially influence persistence.

Summary

Student attrition is a major issue for colleges across the United States, especially two-year colleges, as the national first to second year persistence rate is 51.4% (ACT, 2007). There are a number of existing theories that attempt to explain why students drop out of college and/or persist. The following four theories included in this review of literature are some of the more referenced theories on research related to retention and persistence today: 1) Tinto's (1975) Student Integration Model, 2) Bean's (1980) Model of Student Departure, 3) Astin's (1984) Student Involvement Theory, and 4) Pascarella's (1985) General Causal Model. In Tinto's (1975) student integration model, he contends that the extent of a student's academic and social integration determine the extent of their institutional commitment, consequently contributing to persistence or attrition. In other words, if the student is integrated into the academic and social fabrics of the college, they will have a stronger commitment to the institution and be more likely to persist. Tinto (1975, 1993) also goes to say that both student and institutional characteristics effect how students should be served and that different groups (i.e., at-risk, honor, returning adult-learner) of students require different forms of support resources. Similar to Tinto's (1975) student integration model, Bean's (1980) model of student departure recognizes student characteristics as variables that influence persistence. Unlike Tinto (1975) however, Bean (1980) suggests that the extent of a student's satisfaction with the institution determines the level of their institutional commitment; the higher the institutional commitment, the more likely the student will persist. In Astin's (1984) developmental theory of student involvement, he reiterates Tinto's (1975) recognition of social and academic integration as the key variables to why students persist or drop-out of college. Lastly, Pascarella's (1985) general causal model suggests that it is student, institutional, social characteristics and academic integration that all contribute

to persistence. In reviewing the main tenets of each of these respective theories, there appears to be some overlap in factors contributing to student retention (see Table 6).

Table 6

Notable Theories of Student Attrition

Possible factors contributing to student retention	**Tinto's (1975) Student Integration Model**	**Bean's (1980) Model of Student Departure**	**Astin's (1984) Student Involvement Theory**	**Pascarella's (1985) General Causal Model**
Student Characteristics	XX	XX		XX
Institutional Characteristics	XX			XX
Social Integration	XX		XX	XX
Academic Integration	XX		XX	XX
Student Satisfaction		XX		
Institutional Commitment	XX	XX		

Student Success Seminar and Academic Performance and Persistence

Prior to the 1970's, research on the influence of participating in a student success seminar is extremely limited (Drake, 1966; Fitts & Swift, 1928). However, with the resurgence in popularity of the student success seminar in the 1970's, a number of studies have been conducted

(Barefoot, 1993; Fidler, 1991; Fidler & Hunter, 1989; Rice, Keefer, & Elam, 1991; Shanley & Witten, 1990; Stovall, 1999; Zeidenberg et. al., 2007).

Research examining the relationships between participating in a community college student success seminar and academic performance is reviewed first. This section is followed by a review of research investigating the relationship between participation in a student success seminar and persistence. Lastly, studies identifying the impact of community college student success seminars on the academic performance and persistence of subgroups of students are detailed.

Academic Performance and Student Success Courses

A number of researchers have reported that students who participate in a student success seminar earn a higher grade point average than students who do not participate in such a course (Barefoot, 1993; Bourdreau & Kromrey, 1994; Jones, 1984; Sloan, 1991; Stovall, 1999; Waschull, 2001). However, there are other researchers that do not support such claims (Reis, 1989; Smacchi, 1991; Walls, 1996). Most of the research examining the relationship between participation in a student success seminar and academic performance explored only academic performance during the first semester or first year of college. Smacchi (1991), Stovall (1999), and Walls, (1996) are studies that explored academic performance of success course participants beyond the first year of college.

In a study by Jones (1984), he investigated the first-semester grade point average of 377 full-time students who completed a student success seminar. Jones found that the mean first semester grade point average (2.28) of participants was significantly higher than the mean first semester grade point average (1.72) of the 433 students in the comparison group. In another study, Sloan (1991) found a significant difference in mean first semester grade point average for

both full-time (2.43) and part-time (2.24) students who participated in a success seminar when compared to the mean first semester grade point average of full-time (2.19) and part-time (1.39) students who did not participate in such a course. Further analysis utilizing multiple regression analysis indicated that for the 1,282 students in the study, participation in the course explained 4.3% of the variance in first-semester grade point average.

Smacchi (1991) investigated the grade point averages of students who participated in a student success seminar at Reading Area Community College. She found that the mean first semester grade point average of the course participants (n=90) was significantly higher than the mean first term grade point average of a comparison group of nonparticipants (n=90). The participants in this study were students who participated in the student success seminar during Fall 1989, the first semester the course was offered at the college. The comparison group was selected from the freshman class of Fall 1988, the year before the class was offered. Although Smacchi (1991) found a significant difference in the mean first semester grade point average between the two groups, further analysis revealed that when the grades earned in the student success seminar were removed from the grade point averages, there was no longer a significant difference. Smacchi also found no significant differences in mean grade point averages between the groups for their second or third semester of enrollment.

Glass and Garrett (1995) investigated students who participated in a student success seminar (n=86) at four community colleges in North Carolina during Fall 1991. At the end of the first year of college enrollment, course participants were found to have a significantly higher mean cumulative grade point average (2.56) than a matched control group of nonparticipants (2.22). The study was limited to full-time, degree seeking students. To control for individual characteristics that have been found to influence persistence, nonparticipants were individually

matched to participants according to gender, ethnicity, age, entrance test scores, employment status, and college major. Only those students who earned a grade of C or higher in the student success course were considered participants for the purposes of the study.

Rather than compare mean grade point averages between success seminar participants and nonparticipants, Belcher et al. (1987) compared the proportions of participants and nonparticipants who were in good academic standing (those who had grade point averages above 2.0). They found that a significantly higher percentage of students who completed the student success seminar during their first semester of enrollment were in good standing at both the end of the first semester (68% vs. 56% of nonparticipants) and at the end of the first year (60% vs. 56%).

Stovall (1999) investigated the relationship between participation in a success seminar and academic performance as measured by grade point average and credit hour completion. Using multiple linear regression analysis, she determined that participation in a success seminar was related to a .501 increase in first-term grade point average. Additional regression analyses were conducted to explore whether or not participation in a success seminar impacted subgroups of students differently according to age, gender, ethnicity, high school experience, initial enrollment status, academic ability, declaration of program of study, and transfer intent. Only ethnicity and declaration of program of study were not related to first semester grade point average at a statistically significant level.

Several studies found no significant difference when comparing grade point averages of course participants to nonparticipants (Reis, 1989; Rudmann, 1992; Walls, 1996). For example, Reis (1989) found that the mean first semester grade point average for success seminar

participants (2.54) was not significantly different than the mean first semester grade point average of the comparison group of nonparticipants (2.32).

Rudmann (1992) found no significant difference between mean grade point averages of success seminar participants (n=200) and nonparticipants (n=409) at the end of the first semester or first year. Though Rudman provided no explanation, only students who earned a grade of C or better in the student success seminar were considered to be "successful" participants. In addition to comparing successful course participants (those with a grade of C or better) to nonparticipants, Rudmann also compared successful course participants to "unsuccessful" course participants (those who enrolled in the course but received a grade of D, F, W, or no credit). Rudmann found no significant difference in mean first semester or first year grade point averages of successful course participants (n=200) compared to unsuccessful participants (n=57).

In a study that investigated grade point average beyond the first year, Walls (1996) compared grade point averages of course participants to nonparticipants at the end of the first, second, third, fourth, and fifth semesters. No significant difference was found for any of the terms.

In investigating the academic performance of community college student success seminar participants, several studies previously described have also compared the average number of credits earned by course participants to nonparticipants (Glass & Garrett, 1995; Reis, 1989; Rudmann, 1992). Glass and Garrett (1995) found that following one year of enrollment, success seminar participants had earned an average of 44.38 credits, which was significantly higher than the average 35.02 credits earned by the individually matched control group. Reis (1989) found no significant difference in the mean number of first-semester credits earned by course participants when compared to a group of nonparticipants. Rudmann (1992) also reported no

significant difference in the number of credits earned by course participants as compared to nonparticipants at the end of their first semester or at the end of their first year.

Walls (1996) examined credit hour completion rates of community college students at the end of the first, second, third, fourth, and fifth terms and found no significant differences between success seminar participants and nonparticipants.

Overall, research regarding the academic performance of student success seminar participants is limited to the first semester or first year of college. Research results are based on comparisons of group means and proportions rather than through analysis of the variance within or between the participant and nonparticipant groups. Some studies indicated improved academic performance for course participants; others did not. The attempts to compare overall grade performance for such a heterogeneous group, without any control for individual differences of students, may be one explanation for the mixed results.

Persistence and Student Success Courses

Research examining the relationship between participation in a community college student success seminar and persistence focused on student persistence to the second term of college (Barefoot 1993; Belcher et al., 1987; Donnangelo & SantaRita, 1982; Reis, 1989) or to the second year of college (Barefoot, 1993, Belcher et al., 1987; Glass & Garrett, 1995; Gunder & Hellmich, 1996; Jones, 1984; Rudmann, 1992, Smacchi, 1991; Walls 1996). For example, in a study conducted at Moraine Valley Community College, Illinois, 73 participants in a fall semester student success seminar re-enrolled in the second semester at a significantly higher rate (85%) than a comparison group of 1,147 nonparticipants (72%). In that study, Reis (1989) attempted to create equivalent groups by including equal proportions of students in the control

group as were in the participant group according to program of study, gender, and full- or part-time enrollment status. The mean age for both groups of student was also equivalent.

Jones (1984) reported persistence to the second semester to be significantly higher for participants in a one-credit community college success seminar than for a comparison group of nonparticipants. His study included 377 students representing three cohorts of first-term, full-time students who had volunteered to participate in the course one of three successive fall semesters. The 433 nonparticipants were identified from first-term full-time students, each of the same three semesters, who did not participate in the class. Jones claimed that the participant and nonparticipant groups were homogenous regarding age and ethnicity but presented no statistical evidence to support such claim. Because the number of participants in the second cohort was small (n=15), Jones did not report persistence for that cohort. He also did not report persistence for all three cohorts combined. Jones did report data indicating that, in the first cohort of students, a significantly higher percentage (80%) of the 172 that participated in the student success seminar persisted to the second semester when compared to the 185 nonparticipants (43% persisted to the second semester). The same results were found for students in the third cohort. Of the 150 course participants in that cohort, 85% persisted to the second semester compared to 60% of the nonparticipants (n=155). The study did not control for individual background characteristics that might have influenced student persistence. Therefore, it is difficult to determine the exact relationship between participation in the course and persistence.

Researchers at Miami-Dade Community College, Florida, explored persistence to the second year of college. They compared 1,145 students who participated in a one-credit student success seminar during their first semester of enrollment to a group of first-semester

nonparticipants (n=863). They found that a significantly higher percentage of participants (67%) were still enrolled at the end of the third semester of college compared to only 46% of the nonparticipants (Belcher et al., 1987).

The participant and nonparticipant groups for the study were limited to students who were pursuing an Associate of Arts or Associate of Science degree. No explanation regarding whether students volunteered or were assigned to participate in the course was provided. The participant and nonparticipant groups were not matched and were found to be statistically different on several variables. Participants were more likely than nonparticipants to be black, non-Hispanics, less than 23 years old, seeking an Associate of Arts degree, and enrolled in fewer than 12 credits. Separate chi-square analyses were conducted to determine whether persistence varied between the participants and nonparticipants according to each of the following variables: ethnicity, gender, age, initial enrollment status, degree sought, immigration status, and level of basic skills. However, when comparing persistence of the total sample of participants to that of nonparticipants, these variables were not statistically controlled. Therefore, it is difficult to ascertain whether higher persistence for the participant group was a function of their participation in the student success seminar or a function of one or more of the other variables.

Walls (1996) investigated persistence to the second year for students who participated in a two-credit orientation course in one of three terms: Fall 1993 (n=68), Fall 1994 (n=95), or Fall 1995 (n= 92). Nonparticipants were individually matched to participants according to age, gender, ethnicity, writing placement, and high school class rank percentile. Both groups were limited to first-term, full-time, associate degree seeking students. Walls found that for all three cohorts studied, a significantly higher percentage of course participants re-enrolled in the second semester than did nonparticipants. Second year persistence was investigated for the Fall 1993

and Fall 1994 cohorts. Although participants in the Fall 1994 cohort re-enrolled in the second year at significantly higher rates than nonparticipants, there was no statistically significant difference in persistence to the second year between participants and nonparticipants in the Fall 1993 cohort.

Little research has been conducted examining the long-term persistence of students who complete a community college success seminar. Only four studies considering the persistence of success seminar participants beyond the second year were located in the literature (Barefoot, 1993; Nelson, 1993; Sloan, 1992; Stovall, 1999). The persistence of student success seminar participants (n=4,175) at Valencia Community College, Florida was studied at the end of the fourth, seventh, and eleventh terms following course enrollment. When compared to a group of nonparticipants, a higher percentage of participants were enrolled at the end of each of the terms (Nelson, 1993). Student success seminar participants were enrolled at the following rates: 65% after four terms, 48% after seven terms, and 30% after eleven terms. These percentages were compared to the enrollment rates of the similar group of nonparticipants for the same terms that were 50%, 33%, and 20% respectively. Although Nelson claimed that the two groups were similar, no description of the characteristics of students in either the participant or the nonparticipant groups was presented. The number of students in the nonparticipant comparison group was also not clear.

Researchers at Genesee Community College, New York, compared the three-year persistence of students who participated in a Fall 1989 student success seminar to that of a control group of nonparticipants. This study indicated that, with the exception of students identified as remedial, course participants were reported to be significantly more likely than

nonparticipants to have earned a degree or still be enrolled in college three years following course enrollment (Barefoot, 1993).

In a study that examined the three-year graduation rates of 1,282 students at a large urban community college, discriminant function analysis revealed no significant relationship between participation in a one-credit student success seminar and graduation. Utilizing chi-square analysis, this same study did reveal a significant relationship between participation in the success seminar and persistence to the second year of college. Approximately 47% of the full-time students who took the course re-enrolled for the second year while only 34% of the comparison sample of full-time students who did not take the course re-enrolled. The difference was also significant when comparing groups of part-time students. For the part-time groups, 30% of the part-time students who did not take the course persisted (Sloan, 1991).

Stovall (1999) examined persistence rates of voluntary participants (n=97) in a student success seminar and non-participants (n=2,183) from first to second semesters and persistence to second and third years. In addition, she evaluated graduation rates of participants and nonparticipants after second and third years. Both continuous enrollment and total terms of enrollment were investigated. A statistically-significant positive association was found between participation and continuous enrollment to the second term, second year, and third year. There was also a significant positive relationship between participation and total terms of enrollment. No differences in graduation by the end of the second year following initial college enrollment were found; however, there was a statistically-significant positive relationship between participation in a success seminar and graduation by the end of the third year.

Studies presented explored the persistence of community college student success seminar participants from first to second semester or first to second year. Little research is available

regarding long-term persistence and graduation of community college student success seminar participants. Based on the lack of research available, it was not possible to conclude whether or not there was a relationship between participation in a community college success seminar and long-term persistence. Most of the research is limited to students who were enrolled full-time in an associate degree program. Little research is available about part-time students or students with goals other than an associate degree – the majority of community college students. Although several researchers acknowledge that the participant and nonparticipant groups were not equivalent regarding the individual characteristics that have been found to influence persistence, most research did not control for these differences. Lastly, very few studies indicate what type of student success seminar was offered to participants, whether it was voluntary or required, and whether the course was universally designed across all sections offered.

Other Variables

Various researchers have examined how individual characteristics of students are related to community college persistence or attrition (Astin, 1975; Brooks-Leonard, 1991; Cope, 1978; Feldman, 1993; Gates & Creamer, 1984; Hoyt, 1989; Mandsager, 1992; Pantages & Creedon, 1978; Pascarella, Duby, Miller, & Rasher, 1981; Pascarella et al., 1986; Stovall, 1999; Tinto, 1993; Webb, 1989). Individual characteristics most often examined as correlates of persistence are age, enrollments status, employment status, degree intent, high school performance, socioeconomic status, gender, and ethnicity. The studies presented utilized a variety of methodologies. The results have been somewhat mixed; however, enrollment status, employment status, degree intent, and high school performance appear to reflect a more consistent impact on persistence than the other individual characteristics.

Age

Based on a review of 25 years of retention research, Pantages and Creedon (1978) concluded that age was not a primary factor in student persistence. Mohammidi (1994) studied nearly 4,000 community college students and, utilizing logistic regression analysis involving numerous variables, also found that age was not a significant predictor of retention. Webb (1989) found the same result when using stepwise regression analysis to predict retention based on data obtained from the records of 36,603 students. The 36,603 students had enrolled in college for the first time at three of nine campuses of an urban community college over a two-year period.

Other studies have found significant relationships between age and persistence (Astin, 1975; Brooks-Leonard, 1991; Feldman, 1993; Stovall, 1999). However, the results vary suggesting that there is no consistent age group most at risk for drop out. For example, in the study by Feldman (1993) previously discussed, student between the ages of 20 and 24 were more likely to drop out than were students either older or younger. In a separate study previously discussed, Brooks-Leonard (1991) found that students over age 40 were the most likely to dropout. In Stovall's study (1999), she found no significant relationship between students 25 years or older and students 24 years or younger in persisting to the second term as well as the second year. However, when comparing the two groups in persisting to the third year, found a greater impact on the persistence of students who were age 25 or older than age 24 or younger.

Gender

There are contradictory results when examining studies relating gender and college persistence. Many studies, most of which were previously presented, found no difference in the

persistence patterns of male and female community college students (Brooks-Leonard, 1991; Cope & Hannah, 1975; Hoyt, 1989; Pantages & Creedon, 1978; Pascarella et al., 1986; Stovall, 1999). Other studies found a difference. Peng and Fetters (1978) and Mohammadi (1994) found that male students were more likely to persist to second year of college than female students. Feldman (1993) and Voorhees (1987), however, found that female students were more likely to persist to the second year. Although he did not indicate any direct relationship between gender and college persistence, Tinto (1993) suggested that females are more likely than males to leave college voluntarily whereas males are more likely to stay in college unless they are required to leave for academic purposes.

Ethnicity

A debate regarding the relationship between ethnicity and persistence is evident in the literature. Pantages and Creedon (1978) reported that most retention research conducted between 1950 and 1975 found no significant relationship between ethnicity and persistence once high school performance was taken into account. In more recent studies that were previously introduced in this literature review, Feldman, (1993), Mohammadi (1994), and Stovall (1999) each found that white community college students persisted at higher rates than minority students. Brooks-Leonard (1991), Voorhees (1987), and Zeidenberg et. al., (2007), however, found no relationships between ethnicity and student persistence. It is important to note that the results of all these studies were based on samples of students in which most students were white.

Enrollment Status

Researchers (Brooks-Leonard, 1991; Feldman, 1993; Gates & Creamer, 1984; Hoyt, 1989; Mohammadi, 1994; Rudmann, 1992; Stovall, 1999) have suggested that community

college students who begin college enrollment as full-time students are more likely to continue their enrollment than students who begin their enrollment as part-time students. Feldman (1993) studied the second-year return rates of 1,140 students at one community college. Utilizing chi-square analysis to compare the percentage of full-time students to the percentage of part-time students who returned for the second year, she found that a higher proportion of full-time students returned. The difference was statistically significant. Further study utilizing logistic regression analysis revealed that enrollment status was the third most important predictor (following high school grade point average and age) of second-year return. In as much as there is research suggesting full-time students are more likely to continue their enrollment, additional findings express the contrary. Although Rudmann (1992) found persistence to the second term significantly higher for full-time students who participated in a student success course than for full-time students who did not participate, there was no significant difference in persistence to the second term for course participants and non-participants who were enrolled part-time. Sloan (1991) also examined the impact of participation in a success course on persistence to the second term according to enrollment status but found no significant differences.

Degree Intent

Gates and Creamer (1984) analyzed the records of 4,854 two-year college students that were part of the National Longitudinal Study of the High School Class of 1972 (NLS-72). Their analysis of the status of each student four years after their initial college enrollment revealed that students with higher educational aspirations were more likely to have graduated or still be enrolled. Other researchers have supported this research with findings that community college students pursuing a degree or certificate are more likely to continue enrollment than students who enroll in courses with no degree intent (Brooks-Leonard, 1991; Webb, 1989).

Voorhees (1987) used logit modeling to test the influence of a variety of individual characteristics and experiences on community college student persistence. Following his study of 369 students at one urban community college, he concluded that intent to transfer was positively related to persistence at the community college. Conflicting with this finding, Stahl (1992) and Stahl and Pavel (1992) reported that higher educational goals were negatively associated with community college persistence. After studying 665 students at one community college in an urban multi-college district, they concluded that students with higher educational goals were more likely to leave the community college at the end of their first year in order to transfer to four-year universities. Utilizing logistic regression analysis, Stovall's (1999) findings show that declaration of program of study and intent to transfer to a four-year college were not associated with persistence to the second year at a statistically significant level. Based on the evidence supported by these aforementioned studies, it is difficult to draw many conclusions given the conflicted findings.

High School Performance

Astin (1975), Cope & Hannah (1975), Tinto (1975), and Pantages and Creedon (1978) all claimed that one of the best predictors of students' persistence in college is their high school performance. In the study of 1,140 rural community college students previously introduced in this review, Feldman (1993) supported this claim. Feldman found that high school grade point average was the single strongest predictor of college persistence. Other researchers have reported similar results (Gates & Creamer, 1984; Velez, 1985; Webb, 1989). Nevertheless, there may be limitations to that effect on long-term persistence. Utilizing logistic regression analysis, Stovall (1999) found that the odds of persisting to the second term were 1.7 times greater for students who earned a traditional high school diploma when compared to students who received

a GED. However, she found no significant differences between those students who earned a traditional high school diploma or GED in persisting to the second and third years of college.

Mandatory verse Voluntary

In October 2009, the National Resource Center for The First-Year Experience and Students in Transition undertook its eighth triennial survey for first-year seminar programming in American higher education. The purpose of the study was to gather information about student success seminars in American higher education. Of the 890 institutions that reported offering a student success seminar, over fourteen percent (14.1%) of all institutions (i.e., public, private, two-year, four-year) reported requiring academically underprepared students to take a student success seminar. When compared by institutional type, 18.3% of two-year institutions reported requiring academically underprepared students to take a seminar, whereas 13.0% of four-year institutions required the same population. A larger difference occurred when compared by institutional control, with 19.0% of public institutions requiring academically underprepared students to take a seminar, and only 9.0% of private institutions requiring the same population (National Resource Center, 2009). Currently there is no existing research on the influence of participating in a mandatory or required student success seminar. Existing studies predominantly have been of the voluntary type or do not disclose whether the population of students that participated in a seminar was voluntary or mandated. This study ascertained whether participation in a required student success seminar has any influence on student persistence, academic performance, and graduation rates.

Quarters verse Semesters

In the previously mentioned survey of first-year programming conducted in 2009 by the National Resource Center for The First-Year Experience and Students in Transition, of the 890 institutions that responded as having a student success seminar, nearly seventy percent (67.8%) of institutions reported the length of the student success seminar being one semester. 12.6% reported half a semester, followed by 5.9% reporting one quarter, and 3.8% for one year and 10.0% reporting other. Consistent with the lack of research on student success seminars being required or voluntary, there appears to be a gap in the research regarding the influence of participating in a mandatory student success seminar on academic performance, persistence, and graduation rates. Research predominantly addresses semester system institutions or otherwise do not state the length of their seminar.

Summary of Review of Literature

Several researchers have suggested that the individual background characteristics of entering college students influence their persistence in college. Although research results were conflicting, students generally expected to be most at risk for dropping out are those who are older, are enrolled in college part-time, are employed full-time, did not perform well in high school, and are not pursuing a college degree. Many community college students fit this description. Overall, researchers agreed that individual background characteristics influence student persistence because they impact how students interact within the college environment. Furthermore, the student interactions within the college environment are what most influence student performance and persistence.

College persistence is a uniquely individual phenomenon. Students decide whether to stay or leave a college based on their own unique experiences. Most vital to their persistence is that they believe themselves to be in congruence with the college environment. This congruence is established through integration. Tinto (1975) suggested that integration occurs through both the academic and social communities of a college and that it is important for students to become integrated into at least one of those communities early in their college experiences. Academic integration is more important than social integration to the persistence of community college students. Community college students, most all of whom live at home and commute, tend to seek social support and interaction through friends in their communities and families rather than from the college environment.

With the goal of helping to ease the transition and improve the performance of students new to the community college, many colleges have implemented student success seminars; courses developed in concurrence with the theory of student departure (Tinto, 1975, 1988, 1990). Student success seminars generally are recommended to students for their first term of enrollment. The courses provide an opportunity for students to learn to identify campus resources, establish relationships with other students and faculty, and assess and improve their academic and life management skills. The courses are designed to help the students feel more comfortable in the college environment initially, to help them find answers to their questions as they work throughout their early college experiences, and develop the academic skills needed for college success.

Research conducted in community colleges suggested positive short-term relationships between participation in a student success seminar and student persistence and academic performance (Barefoot, 1993; Belcher et. al., 1987; Glass & Garrett, 1995; Jones, 1984; Nelson,

1993; Reis, 1989; Stovall, 1999; Walls, 1996). Very little research explored the relationships between participation in the course and persistence and academic performance beyond the second year of college. Because of the lack of research, little is known regarding the relationships between participation in a student success seminar and long-term academic performance, persistence and graduation.

Most research conducted with student success seminar participants has assumed a homogenous population of students. Often, limiting the sample to only full-time students seeking an associate degree induced some degree of homogeneity. Few studies considered the influence of individual characteristics of students on their persistence. Furthermore, because few studies have explored the experiences of subgroups of participants, little is known about the differential impact of student success courses.

Chapter 3: Design of Study

The purpose of this study was to investigate the relationships between participation in a mandatory mixed-format community college student success seminar and short-term and long-term academic performance, persistence, and graduation. This section will describe the philosophical assumptions and approach, the research methodology, and provide information about the site and participants identified for this research.

The research questions, independent variables, and dependent variables for this research are as follows:

1. **How did participation in a community college student success seminar influence grade point averages compared to nonparticipants?**

   Independent Variable: participation in a student success seminar

Dependent Variable: grade point average.

2. **How did participation in a community college student success seminar influence the number of credit hours earned compared to nonparticipants?**

   Independent Variable: participation in a student success seminar.

   Dependent Variable: credit hour completion.

3. **How did participation in a community college student success seminar influence persistence compared to nonparticipants?**

   Independent Variable: participation in a student success seminar.

   Dependent Variable: persistence.

4. **How did participation in a community college student success seminar influence graduation rates compared to nonparticipants?**

   Independent Variable: participation in a student success seminar.

   Dependent Variable: graduation rates.

5. **How did participation in a community college student success seminar impact grade point average, credit hours earned, persistence, and graduation differently for subgroups of students identified according to age, gender, ethnicity, high school experience, initial enrollment status, and degree intent?**

   Independent Variable: age, gender, ethnicity, initial enrollment status, degree intent, and high school performance.

   Dependent Variables: grade point average, credit hours earned, persistence, and graduation rates.

Philosophical Approach: Post-positivism

Philosophy provides the framework through which the researcher can understand the world. It provides the premises by which the researcher can discover truth. Every researcher has some understanding of the world. Upon consideration of the research questions, this researcher chose to approach the proposed study from a post-positivist perspective rather than purely a positivist one. Positivists approach research in a very objective, controlled, rigid, and rigorous manner; attempting to reach an objective truth. This researcher leans further toward post-positivism because it is less rigid than positivism. In other words, post-positivists will strive for the same type of certainty or truth as the positivists but also recognize that all observations are imperfect and that all theories are revisable (Trochim, 2002). To understand the differences between the two philosophies, positivism is discussed in order to provide a framework for better understanding the post-positivist approach chosen for this study.

Positivists seek to solve major practical problems, search for law-like generalizations, and discover precise causal relationships through statistical analysis (Candy, 1991; Crotty, 1998; Kim, 2003). Positivists strive to use valid and reliable methods to describe, predict, and control human behavior. They believe reality exists independent of social context and can be discovered through objectively designed and applied research. They use verification of a priori hypotheses as a means to discover the ultimate truth and immutable laws of nature (Kim, 2003). Positivists contend that research should be context-free, value-free, bias-free, and replicable. They rely on experimental and quasi-experimental research designs, most often requiring rigorously applied interventions or variable manipulations. Traditionally, positivism has been the "gold standard" of research, the "received view," the privileged paradigm (Denzin & Lincoln, 2000; Guba & Lincoln, 1994).

One of the key concepts of the positivist philosophy that applies to this study is the notion that there exists an external, objective reality, which is governed by natural laws. This provides a foundation for exploring the elements of the student success seminar that contribute to student persistence. "Once people discover the laws that govern human life, we can use them to improve how things are done, and to predict what will happen" (Neuman, 2003, p. 71). Learning about how participating in a mandatory mixed-format student success course influences academic performance, persistence, and graduation rates could provide the opportunity for college administrators and faculty to be deliberate in making such courses part of campus policy as well as being more intentional in the design and delivery of the student success seminar – one based on a culture of evidence.

Assumptions about the nature of truth. The goal of the post-positivist, like the positivist, is to discover cause and effect relationships and to predict and control future behavior on the basis of present behavior (Guba & Lincoln, 1994; Walker & Evers, 1988). Unlike positivists, post-positivists do not subscribe to the concepts of verification and certainty the way positivists do. Post-positivists accept that not all statements can be fully verified through direct observation and sense (or brute) data. However, they do maintain the positivist stance on objective reality (Crotty, 1998).

Positivists believe that logical deductive reasoning, scientific inquiry, and replicable findings will converge upon apprehendable objective truths. Post-positivists believe that an objective world does exist beyond the human mind, but that only "partially objective accounts of the world can be produced because all methods are flawed" (Denzin & Lincoln, 1994, p. 15). While truth can never be fully apprehended, this researcher agrees with post-positivists in that it is through research and statistical analysis that a researcher can state that there is a high

probability that truth has been obtained. In relation to the current study, the research analysis attempted to determine that there is a high probability that participating in a mandatory mixed-format student success course influenced successful academic performance, persistence, and higher graduation rates.

Post-positivists believe that knowledge of an existing world can be approached or approximated through probable statistics, as noted. In addition, positivists maintain that the inquirer should be a "distanced observer" and objectivity and neutrality of the researcher essential. Post-positivists appreciate and strive for rigor and control in design yet acknowledge that in dealing with human nature total objectivity is unattainable (Candy, 1991; Crotty, 1998; Guba & Lincoln, 1994). Therefore, the goal of the post-positivist is to both acknowledge the presence of human interactivity and control for it as much as possible. With this in mind, mediating variables such as age, gender, ethnicity, high school performance, initial enrollment status, and degree intent were controlled for in this research design. Employing a post-positivistic philosophy, this study focused on examining the influence of participating in a mandatory mixed-format student success seminar and short and long-term academic performance, persistence, and graduation in an urban community college.

Research Methodology

The purpose of this study is to examine any relationship that may exist between: (a) demographic variables, (b) short and long-term academic performance, (c) short and long-term persistence, and (d) graduation rates by students who participate in a mandatory mixed-format student success course. The research procedures employed in this study are identified below. They include research design, context, population, data collection and data analysis.

Research design. Post-positivist methodology is most often associated with a quantitative approach. This study employed a quantitative methodology, specifically descriptive and correlational design, to measure the degree of association between factors supporting academic performance, persistence, and graduation rates of students at an urban community college. Creswell (2005) asserts that descriptive statistics present information that helps examine research within a database and determine overall trends as well as the distribution of data. As the purpose of this study was to examine the influence of participating in a mandatory mixed-format student success course on short and long-term academic performance, persistence, and graduation in an urban community college, a descriptive design using correlation was an appropriate approach for this study.

Site selection. The site for this research was an urban community college in the Pacific Northwest; the site was selected for several reasons. Over the past seven years the college consistently collected and analyzed data to inform changes within the institution. Some of these efforts were to increase student success and graduation rates. The second reason is that this researcher was involved in the development of the college's current student success seminar. Over the past nine years the institution uncovered some promising data related to the course but never put any of that data through a more formalized statistical analysis. The research site supported this researcher's work and offered complete access to their database and resources necessary to complete this research. Lastly, the community college selected for this study was the only known two-year college that requires a mixed-format student success seminar.

Data collection. Data for this research was collected from the research sites enrollment database. To retrieve this data, the college's Institutional Effectiveness Office assisted. In order to gather the data necessary, a number of queries and database searches were necessary. Data

was based on a cohort of first time, part and full-time students that started college in the fall of 2007; fall of 2008; and fall of 2009. Selection of these cohorts allowed for an appropriate amount of time for student progression and fit with the application of chi-square analysis and unpaired t-tests.

Data analysis. Research questions I and II sought to confirm that student success seminar participants earn higher grade point averages and have higher credit hour completion percentages than nonparticipants. An unpaired t-test was used to investigate these questions as it is appropriate for examining quantitative/continuous variables where you have the mean, standard deviation (or variance) and the N's for two groups (i.e., participants/non-participants) (Cohen & Cohen, 1983; Lewis-Beck, 1980, 1995; Terenzini & Upcraft, 1996).

Research questions III and IV sought to confirm whether student success seminar participants persist for more terms, and graduate at higher rates, than nonparticipants. Chi-square analyses was used to analyze the data related to these questions. The use of chi-square analysis utilizing contingency tables (cross-tabs) is the most appropriate statistical analysis for a few reasons (Glass & Hopkins, 1996; Pedhazur, 1997). The dependent variables in question, persistence and graduation, are both categorical. In addition, the research question is comparing two groups (participant and non-participant).

Research question five sought to explore whether or not participation in a student success seminar impacts the persistence, performance, and graduation of subgroups of students differently. Subgroup variables are defined according to age, gender, ethnicity, initial enrollment status, high school performance, and degree intent. As with the statistical analysis employed in research questions I and II, related to grade point averages and credit hour completion, an

unpaired t-test was used for each of the subgroup variables. Chi-square analysis was utilized for each of the subgroup variables as it pertains to persistence and graduation.

Strategies for protection of human subjects. In order to protect the participants in this study, this researcher adhered to appropriate procedures to protect all members of this study. This researcher followed the Oregon State Human Subjects policy and obtained appropriate approval from the Institutional Review Board and research site before implementing this research.

In July 2007, this researcher completed the Oregon State University course in the Protection of Human Research Subjects. This researcher followed the Oregon State Human Subjects Policy and acquired approval from the Institutional Review Board before undertaking this study. All subjects remained anonymous and, when appropriate, individual informed consent from students, faculty, and administrators was acquired.

Anticipated timeline.

Timeline	
September 2013	Proposal Meeting/submit IRB
October 2013	IRB approval
July 2014	Finish data collection
July 2014	Data analyzed
October 2014	Draft 1
November 2014	Draft reviewed
November 2014	Draft 2
December 2014	Approval & Defense

Chapter 4: Results

The purpose of the research was to examine the relationship between participation in a community college student success course and short and long-term academic performance, persistence, and graduation. The study examined whether or not students who participated in a student success seminar, when compared to their peers who did not participate in such a course, earned higher grades, completed a higher percentage of credits, enrolled for more terms, and graduated at higher rates during a four-year period following initial college enrollment. The study included the examination of the differential impact of success course participation for subgroups of students identified by age, gender, ethnicity, high school performance, initial enrollment status, and degree intent. Chapter four is presented in four sections; (a) findings related to research questions one and two that investigated academic performance as measured by grade point average and credit-hour completion percentage, (b) findings related to research question three that investigated persistence, (c) findings related to research question four that investigated graduation, and (d) chapter summary. The findings of the related subgroup analyses, which parallel research question five, are presented following the findings of each research question.

Findings Related to Academic Performance

Research questions one and two investigated the relationship between participation in a student success course and academic performance as measured by grade point average and credit hour completion percentage. Unpaired t-tests were conducted to test each of these research questions. Additionally, t-tests were conducted to explore whether or not participation in a student success course impacted sub-groups differently according to age, gender, ethnicity, high school performance, initial enrollment status, and degree intent.

Research Question I. How did participation in a community college student success seminar influence grade point averages compared to nonparticipants?

(a) There was no significant difference in the first-term grade point average of student success seminar participants compared to nonparticipants;

(b) There was no significant difference in the second-term grade point average of student success seminar participants when compared to nonparticipants;

(c) There was no significant difference in the third-term grade point average of student success seminar participants when compared to nonparticipants;

(d) There was no significant difference in the second-year grade point average of student success seminar participants when compared to nonparticipants;

(e) There was no significant difference in the third-year grade point average of student success seminar participants when compared to nonparticipants; and

(f) There was no significant difference in the fourth-year grade point average of student success seminar participants when compared to nonparticipants.

Hypothesis Ia. An unpaired t-test was conducted to compare the first-term grade point average of student success seminar participants and nonparticipants. Due to the similarities of the 2007, 2008, and 2009 populations of participants and nonparticipants, the three cohorts were combined providing for a larger n (participants n = 1489; nonparticipants n = 638). Results indicated that there was a significant difference in grade point average between student success seminar participants (M = 2.6026; SD = 1.2456) and nonparticipants (M = 2.4437; SD = 1.2126); $t(2125) = 2.7174$, $p = 0.0066$. These results suggest that participating in student success seminar effects grade point average. Specifically, the results suggest that students who participate in

student success seminar earn a higher grade point average than students who do not participate in student success seminar.

Hypothesis Ib. An unpaired t-test was conducted to compare the second-term grade point average of student success seminar participants (n = 1159) and nonparticipants (n = 369). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.6997; SD = 0.911) and nonparticipants (M = 2.5968; SD = 0.9202); t(1526) = 1.8851, p = 0.0596. These results suggest that participating in student success seminar does not have an influence on second-term grade point average.

Hypothesis Ic. An unpaired t-test was conducted to compare the third-term grade point average of student success seminar participants (n = 1037) and nonparticipants (n = 322). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.6634; SD = 0.8335) and nonparticipants (M = 2.6117; SD = 0.8106); t(1357) = 0.9786, p = 0.3280. These results suggest that participating in student success seminar does not have an influence on second-term grade point average.

Hypothesis Id. An unpaired t-test was conducted to compare the second-year grade point average of student success seminar participants (n = 653) and nonparticipants (n = 215). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.7498; SD = 0.6891) and nonparticipants (M = 2.6945; SD = 0.6513); t(866) = 1.0343, p = 0.3013. These results suggest that participating in student success seminar does not have an influence on second-year grade point average.

Hypothesis Ie. An unpaired t-test was conducted to compare the third-year grade point average of student success seminar participants (n = 355) and nonparticipants (n = 131). Results indicated that there was not a significant difference in grade point average between student

success seminar participants (M = 2.7481; SD = 0.6407) and nonparticipants (M = 2.6932; SD = 0.5968); t(484) = 0.8535, p = 0.3938. These results suggest that participating in student success seminar does not have an influence on third-year grade point average.

Hypothesis If. An unpaired t-test was conducted to compare the fourth-year grade point average of student success seminar participants (n = 167) and nonparticipants (n = 63). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.7381; SD = 0.6317) and nonparticipants (M = 2.7746; SD = 0.5305); t(228) = 0.4075, p = 0.6841. These results suggest that participating in student success seminar does not have an influence on fourth-year grade point average.

Subgroups. Additional unpaired t-tests were conducted to explore whether or not participating in a student success seminar impacted the grade point average of subgroups of students differently according to age, gender, ethnicity, initial enrollment status, high school performance, and degree intent. Again, due to the similarities of the 2007, 2008, and 2009 populations of participants and nonparticipants, the three cohorts were combined providing for a larger n (participants n = 1489; nonparticipants n = 638).

An unpaired t-test was conducted to compare the first-term grade point average of subgroups (i.e., Over 25 years of age) of student success seminar participants (n = 249) and nonparticipants (n = 104). As indicated in Table 7, findings indicate a significant difference in grade point average between student success seminar participants (M = 3.1378; SD = 1.0824) and nonparticipants (M = 2.8079; SD = 1.023); t(351) = 2.6524, p = 0.0084. These results suggest that participating in student success seminar has an influence on first-term grade point average based on being over 25 years of age.

An unpaired t-test was conducted to compare the first–term grade point average of subgroups (i.e., Under 25 years of age) of student success seminar participants (n = 1240) and nonparticipants (n = 534). Results indicated that there was a significant difference in grade point average between student success seminar participants (M = 2.4959; SD = 1.2489) and nonparticipants (M = 2.3686; SD = 1.2338); t(1772) = 1.9764, p = 0.0483. These results suggest that participating in student success seminar has an influence on first-term grade point average based on being under 25 year of age.

An unpaired t-test was conducted to compare the first–term grade point average of subgroups (i.e., Female) of student success seminar participants (n = 786) and nonparticipants (N = 359). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.7274; SD = 1.2286) and nonparticipants (M = 2.6509; SD = 1.1418); t(1143) = .9990, p = 0.3180. These results suggest that participating in student success seminar does not have an influence on first-term grade point average based on being female.

An unpaired t-test was conducted to compare the first–term grade point average of subgroups (i.e., Male) of student success seminar participants (n = 673) and nonparticipants (n = 279). Results indicated that there was a significant difference in grade point average between student success seminar participants (M = 2.4361; SD = 1.2384) and nonparticipants (M = 2.1712; SD = 1.2512); t(950) = 2.9950, p = 0.0028. These results suggest that participating in student success seminar has an influence on first-term grade point average based on being male.

An unpaired t-test was conducted to compare the first–term grade point average of subgroups (i.e., White) of student success seminar participants (n = 834) and nonparticipants (n = 341). Results indicated that there was not a significant difference in grade point average between

student success seminar participants (M = 2.6193; SD = 1.252) and nonparticipants (M = 2.4686; SD = 1.2077); t(1173) = 1.8918, p = 0.0588. These results suggest that participating in student success seminar does not have an influence on first-term grade point average based on being White.

An unpaired t-test was conducted to compare the first–term grade point average of subgroups (i.e., African-American) of student success seminar participants (n = 146) and nonparticipants (n = 47). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.1019; SD = 1.2579) and nonparticipants (M = 1.7881; SD = 1.1635); t(191) = 1.5141, p = 0.1317. These results suggest that participating in student success seminar does not have an influence on first-term grade point average based on being African-American.

An unpaired t-test was conducted to compare the first–term grade point average of subgroups (i.e., Asian/Pacific Islander) of student success seminar participants (n = 111) and nonparticipants (n = 69). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.7951; SD = 1.2125) and nonparticipants (M = 2.6174; SD = 1.0341); t(178) = 1.0100, p = 0.3138. These results suggest that participating in student success seminar does not have an influence on first-term grade point average based on being Asian/Pacific Islander.

An unpaired t-test was conducted to compare the first–term grade point average of subgroups (i.e., Hispanic) of student success seminar participants (n = 18) and nonparticipants (n = 7). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.5961; SD = 1.421) and nonparticipants (M = 2.5743; SD = 1.2253); t(23) = .0357, p = 0.9719. These results suggest that participating in student

success seminar does not have an influence on first-term grade point average based on being Hispanic.

An unpaired t-test was conducted to compare the first–term grade point average of subgroups (i.e., Other ethnicity) of student success seminar participants (n = 233) and nonparticipants (n = 118). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.5983; SD = 1.2121) and nonparticipants (M = 2.4169; SD = 1.2436); t(349) = 1.3130, p = 0.1900. These results suggest that participating in student success seminar does not have an influence on first-term grade point average based on the racial identification of Other.

An unpaired t-test was conducted to compare the first–term grade point average of subgroups (i.e., 12 + credit hours/Full-time) of student success seminar participants (n = 1101) and nonparticipants (n = 327). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.6828; SD = 1.1404) and nonparticipants (M = 2.5936; SD = 1.0959); t(1426) = 1.2530, p = 0.2104. These results suggest that participating in student success seminar does not have an influence on first-term grade point average based on being a full-time student.

An unpaired t-test was conducted to compare the first–term grade point average of subgroups (i.e., < 12 credit hours/Part-time) of student success seminar participants (n = 388) and nonparticipants (n = 311). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.3807; SD = 1.4799) and nonparticipants (M = 2.2812; SD = 1.2995); t(697) = .9321, p = 0.3516. These results suggest that participating in student success seminar does not have an influence on first-term grade point average based on being a part-time student.

An unpaired t-test was conducted to compare the first–term grade point average of subgroups (i.e., High School Graduate) of student success seminar participants (n = 1364) and nonparticipants (n = 599). Results indicated that there was a significant difference in grade point average between student success seminar participants (M = 2.6127; SD = 1.229) and nonparticipants (M = 2.4304; SD = 1.2089); t(1961) = 3.0413, p = 0.0024. These results suggest that participating in student success seminar has an influence on first-term grade point average based on graduating high school.

An unpaired t-test was conducted to compare the first–term grade point average of subgroups (i.e., GED) of student success seminar participants (n = 99) and nonparticipants (n = 30). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.5929; SD = 1.3822) and nonparticipants (M = 2.4933; SD = 1.3174); t(127) = .3494, p = 0.7273. These results suggest that participating in student success seminar does not have an influence on first-term grade point average based on earning a GED.

An unpaired t-test was conducted to compare the first–term grade point average of subgroups (i.e., Do not plan to transfer) of student success seminar participants (n = 569) and nonparticipants (n = 265). Results indicated that there was a significant difference in grade point average between student success seminar participants (M = 2.632; SD = 1.3226) and nonparticipants (M = 2.3018; SD = 1.305); t(832) = 3.3711, p = 0.0008. These results suggest that participating in student success seminar has an influence on first-term grade point average based on no intent to transfer.

An unpaired t-test was conducted to compare the first–term grade point average of subgroups (i.e., Plan to transfer) of student success seminar participants (n = 920) and

nonparticipants (n = 373). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.5869; SD = 1.1912) and nonparticipants (M = 2.5371; SD = 1.1305); t(1291) = 0.6910, p = 0.4897. These results suggest that participating in student success seminar does not have an influence on first-term grade point average based on intent to transfer.

Table 7

Mean First-Term Grade Point Average by Participation and Subgroup Identification

Subgroup	Participant			Nonparticipant		
	n	M	SD	n	M	SD
Total	1489	2.6026	1.2456	638	2.4437	1.2126
Age group						
Over 25	249	3.1378	1.0824*	104	2.8079	1.1703*
Under 25	1240	2.4959	1.2489**	534	2.3686	1.2338**
Gender						
Female	786	2.7274	1.2286	359	2.6509	1.1418
Male	673	2.4361	1.2384*	279	2.1712	1.2512*
Ethnicity						
White	834	2.6193	1.252	341	2.4686	1.2077
Af. American	146	2.1019	1.2579	47	1.7881	1.1635
Asian/Pac. Islander	111	2.7951	1.2125	69	2.6174	1.0341
Hispanic	18	2.5961	1.421	7	2.5743	1.2253
Other	233	2.5983	1.2121	118	2.4169	1.2436
Initial enrollment status						
Full-time (12 + hours)	1101	2.6828	1.1404	327	2.5936	1.0959
Part-time (< 12 hours)	388	2.3807	1.4799	311	2.2812	1.2995
High school performance						
High school graduate	1364	2.6127	1.229*	599	2.4304	1.2089*
GED recipient	99	2.5929	1.3822	30	2.4933	1.3174

Degree intent						
Did not plan to transfer	569	2.632	1.3226*	265	2.3018	1.305*
Planned to transfer	920	2.5869	1.1912	373	2.5371	1.1305

p = (< .05)**
P = (< .01)*

An unpaired t-test was conducted to compare the second-term grade point average of subgroups (i.e., Over 25 years of age) of student success seminar participants (n = 196) and nonparticipants (n = 83). As indicated in Table 8, results show there was not a significant difference in grade point average between student success seminar participants (M = 2.6822; SD = 1.6033) and nonparticipants (M = 2.5169; SD = 1.1703); t(277) = 0.8481, p = 0.3971 over 25 years of age. These results suggest that participating in student success seminar does not have an influence on second-term grade point average based on being over 25 years of age.

An unpaired t-test was conducted to compare the second–term grade point average of subgroups (i.e., Under 25 years of age) of student success seminar participants (n = 963) and nonparticipants (n = 430). Results indicated that there was a significant difference in grade point average between student success seminar participants (M = 2.2726; SD = 1.52) and nonparticipants (M = 2.506; SD = 1.2292); t(1391) = 2.8011, p = 0.0052. These results suggest that nonparticipants under 25 years of age have higher grade point averages than participants under 25 years of age.

An unpaired t-test was conducted to compare the second–term grade point average of subgroups (i.e., Female) of student success seminar participants (n = 627) and nonparticipants (N = 297). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.3817; SD = 1.6047) and nonparticipants (M = 2.5427; SD = 1.0609); t(922) = 1.5736, p = 0.1159. These results suggest that participating in

student success seminar does not have an influence on second-term grade point average based on being female.

An unpaired t-test was conducted to compare the second–term grade point average of subgroups (i.e., Male) of student success seminar participants (n = 518) and nonparticipants (n = 216). Results indicated that there was a significant difference in grade point average between student success seminar participants (M = 2.3364; SD = 1.4419) and nonparticipants (M = 2.0509; SD = 1.289); t(732) = 2.5201, p = 0.0119. These results suggest that participating in student success seminar has an influence on second-term grade point average based on being male.

An unpaired t-test was conducted to compare the second–term grade point average of subgroups (i.e., White) of student success seminar participants (n = 650) and nonparticipants (n = 271). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.3954; SD = 1.1717) and nonparticipants (M = 2.2966; SD = 1.165); t(919) = 1.1681, p = 0.2431. These results suggest that participating in student success seminar does not have an influence on second-term grade point average based on being White.

An unpaired t-test was conducted to compare the second–term grade point average of subgroups (i.e., African-American) of student success seminar participants (n = 108) and nonparticipants (n = 37). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 1.9108; SD = 1.17) and nonparticipants (M = 1.8327; SD = 1.1811); t(143) = 0.3496, p = 0.7272. These results suggest that participating in student success seminar does not have an influence on second-term grade point average based on being African-American.

An unpaired t-test was conducted to compare the second–term grade point average of subgroups (i.e., Asian/Pacific Islander) of student success seminar participants (n = 94) and nonparticipants (n = 57). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.7517; SD = 1.0104) and nonparticipants (M = 2.6007; SD = 1.0414); t(149) = 0.8800, p = 0.3803. These results suggest that participating in student success seminar does not have an influence on second-term grade point average based on being Asian/Pacific Islander.

An unpaired t-test was conducted to compare the second–term grade point average of subgroups (i.e., Hispanic) of student success seminar participants (n = 15) and nonparticipants (n = 5). Results indicated that there was a significant difference in grade point average between student success seminar participants (M = 2.062; SD = 1.4736) and nonparticipants (M = 1.568; SD = 1.3276); t(18) = 2.1051, p = 0.0496. Although the N for this population is low, the results suggest that participating in student success seminar has an influence on second-term grade point average based on being Hispanic.

An unpaired t-test was conducted to compare the second–term grade point average of subgroups (i.e., Other ethnicity) of student success seminar participants (n = 186) and nonparticipants (n = 99). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.3306; SD = 1.1494) and nonparticipants (M = 2.5155; SD = 1.1573); t(283) = 1.2900, p = 0.1981. These results suggest that participating in student success seminar does not have an influence on second-term grade point average based on the racial identification of Other.

An unpaired t-test was conducted to compare the second–term grade point average of subgroups (i.e., 12 + credit hours/Full-time) of student success seminar participants (n = 917)

and nonparticipants (n = 284). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.4303; SD = 1.1287) and nonparticipants (M = 2.3163; SD = 1.115); t(1199) = 1.4916, p = 0.1361. These results suggest that participating in student success seminar does not have an influence on second-term grade point average based on being a full-time student.

An unpaired t-test was conducted to compare the second–term grade point average of subgroups (i.e., < 12 credit hours/Part-time) of student success seminar participants (n = 242) and nonparticipants (n = 229). Results indicated that there was a significant difference in grade point average between student success seminar participants (M = 1.9984; SD = 1.3578) and nonparticipants (M = 2.2718; SD = 1.2809); t(469) = 2.2450, p = 0.0252. These results suggest that nonparticipants of student success seminar that are enrolled part-time have significantly higher grade point averages than participants enrolled part-time.

An unpaired t-test was conducted to compare the second–term grade point average of subgroups (i.e., High School Graduate) of student success seminar participants (n = 1072) and nonparticipants (n = 485). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.3385; SD = 1.1838) and nonparticipants (M = 2.3053; SD = 1.1761); t(1555) = 0.5135, p = 0.6077. These results suggest that participating in student success seminar does not have an influence on second-term grade point average based on graduating high school.

An unpaired t-test was conducted to compare the second–term grade point average of subgroups (i.e., GED) of student success seminar participants (n = 68) and nonparticipants (n = 21). Results indicated that there was a significant difference in grade point average between student success seminar participants (M = 2.3121; SD = 1.3698) and nonparticipants (M =

2.9948; SD = 1.0761); t(87) = 2.0905, p = 0.0395. These results suggest that nonparticipants of student success seminar that have earned a GED have a significantly higher second-term grade point average than participants that have earned a GED.

An unpaired t-test was conducted to compare the second–term grade point average of subgroups (i.e., Do not plan to transfer) of student success seminar participants (n = 418) and nonparticipants (n = 195). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.3249; SD = 1.2619) and nonparticipants (M = 2.2526; SD = 1.2616); t(611) = 0.6607, p = 0.5090. These results suggest that participating in student success seminar does not have an influence on second-term grade point average based on no intent to transfer.

An unpaired t-test was conducted to compare the second–term grade point average of subgroups (i.e., Plan to transfer) of student success seminar participants (n = 741) and nonparticipants (n = 318). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.3502; SD = 1.1524) and nonparticipants (M = 2.3866; SD = 1.1371); t(1057) = 0.4730, p = 0.6363. These results suggest that participating in student success seminar does not have an influence on second-term grade point average based on intent to transfer.

Table 8

Mean Second-Term Grade Point Average by Participation and Subgroup Identification

Subgroup	Participant			Nonparticipant		
	n	M	SD	n	M	SD
Total	1159	2.3419	1.1926	513	2.3363	1.1872
Age group						
Over 25	196	2.6822	1.6033	83	2.5169	1.1703
Under 25	963	2.2726	1.52**	430	2.506	1.2292**
Gender						
Female	627	2.3817	1.6047	297	2.5427	1.0609
Male	518	2.3364	1.4419**	216	2.0509	1.289**
Ethnicity						
White	650	2.3954	1.1717	271	2.2966	1.165
Af. American	108	1.9108	1.17	37	1.8327	1.1811
Asian/Pac. Islander	94	2.7517	1.0104	57	2.6007	1.0414
Hispanic	15	2.062	1.4736**	5	1.568	1.3276**
Other	186	2.3306	1.1494	99	2.5155	1.1573
Initial enrollment status						
Full-time (12 + hours)	917	2.4303	1.1287	284	2.3163	1.115
Part-time (< 12 hours)	242	1.9984	1.3578**	229	2.2718	1.2809**
High school performance						
High school graduate	1072	2.3385	1.1838	485	2.3053	1.1761
GED recipient	68	2.3121	1.3698**	21	2.9948	1.0761**
Degree intent						
Did not plan to transfer	418	2.3249	1.2619	195	2.2526	1.2616
Planned to transfer	741	2.3502	1.1524	318	2.3866	1.1371

p = (< .05)**

An unpaired t-test was conducted to compare the third-term grade point average of subgroups (i.e., Over 25 years of age) of student success seminar participants (n = 172) and

nonparticipants (n = 80). As indicated in Table 9, results show there was not a significant difference in grade point average between student success seminar participants (M = 2.5998; SD = 1.3186) and nonparticipants (M = 2.6438; SD = 1.637); t(250) = 0.2279, p = 0.8199 over 25 years of age. These results suggest that participating in student success seminar does not have an influence on third-term grade point average based on being over 25 years of age.

An unpaired t-test was conducted to compare the third–term grade point average of subgroups (i.e., Under 25 years of age) of student success seminar participants (n = 865) and nonparticipants (n = 359). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.1691; SD = 1.2016) and nonparticipants (M = 2.2075; SD = 1.1109); t(1222) = 0.5202, p = 0.6030. These results suggest that participating in student success seminar does not have an influence on third-term grade point average based on being under 25 years of age.

An unpaired t-test was conducted to compare the third–term grade point average of subgroups (i.e., Female) of student success seminar participants (n = 573) and nonparticipants (n = 262). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.3488; SD = 1.2305) and nonparticipants (M = 2.4045; SD = 1.0496); t(833) = 0.6346, p = 0.5258. These results suggest that participating in student success seminar does not have an influence on third-term grade point average based on being female.

An unpaired t-test was conducted to compare the third–term grade point average of subgroups (i.e., Male) of student success seminar participants (n = 460) and nonparticipants (n = 177). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.1121; SD = 1.2191) and nonparticipants (M =

2.1172; SD = 1.2238); t(635) = 0.0472, p = 0.9623. These results suggest that participating in student success seminar does not have an influence on third-term grade point average based on being male.

An unpaired t-test was conducted to compare the third–term grade point average of subgroups (i.e., White) of student success seminar participants (n = 577) and nonparticipants (n = 235). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.2315; SD = 1.2415) and nonparticipants (M = 2.1969; SD = 1.148); t(810) = 0.3679, p = 0.7130. These results suggest that participating in student success seminar does not have an influence on third-term grade point average based on being White.

An unpaired t-test was conducted to compare the third–term grade point average of subgroups (i.e., African-American) of student success seminar participants (n = 97) and nonparticipants (n = 30). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 1.8481; SD = 1.2395) and nonparticipants (M = 1.7397; SD = 1.1873); t(125) = 0.4227, p = 0.6732. These results suggest that participating in student success seminar does not have an influence on third-term grade point average based on being African-American.

An unpaired t-test was conducted to compare the third–term grade point average of subgroups (i.e., Asian/Pacific Islander) of student success seminar participants (n = 92) and nonparticipants (n = 53). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.5215; SD = 1.209) and nonparticipants (M = 2.6219; SD = 1.1322); t(143) = 0.4927, p = 0.6230. These results suggest

that participating in student success seminar does not have an influence on third-term grade point average based on being Asian/Pacific Islander.

Because of the reduced number of Hispanic students remaining in the sample at the end of the third-term (participant n = 11 and nonparticipant n = 1), no analyses were conducted to examine whether or not participation in student success seminar impacted third-term grade point average for Hispanic students.

An unpaired t-test was conducted to compare the third–term grade point average of subgroups (i.e., Other ethnicity) of student success seminar participants (n = 168) and nonparticipants (n = 85). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.3696; SD = 1.199) and nonparticipants (M = 2.3234; SD = 1.0286); t(251) = 0.3032, p = 0.7620. These results suggest that participating in student success seminar does not have an influence on third-term grade point for students identifying as Other ethnicity.

An unpaired t-test was conducted to compare the third–term grade point average of subgroups (i.e., 12 + Credit hours/Full-time) of student success seminar participants (n = 829) and nonparticipants (n = 249). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.3201; SD = 1.1941) and nonparticipants (M = 2.2962; SD = 1.022); t(1076) = 0.2859, p = 0.7750. These results suggest that participating in student success seminar does not have an influence on third-term grade point average based on being enrolled in 12 or more credit hours.

An unpaired t-test was conducted to compare the third–term grade point average of subgroups (i.e., < 12 Credit hours/Part-time) of student success seminar participants (n = 208) and nonparticipants (n = 190). Results indicated that there was not a significant difference in

grade point average between student success seminar participants (M = 2.1536; SD = 1.3135) and nonparticipants (M = 2.2737; SD = 1.2618); t(396) = 0.9284, p = 0.3538. These results suggest that participating in student success seminar does not have an influence on third-term grade point average based on being enrolled in less than 12 credit hours.

An unpaired t-test was conducted to compare the third–term grade point average of subgroups (i.e., High school graduate) of student success seminar participants (n = 960) and nonparticipants (n = 415). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.2549; SD = 1.2215) and nonparticipants (M = 2.2638; SD = 1.1207); t(1373) = 0.1271, p = 0.8989. These results suggest that participating in student success seminar does not have an influence on third-term grade point average based on being a high school graduated

An unpaired t-test was conducted to compare the third–term grade point average of subgroups (i.e., GED) of student success seminar participants (n = 59) and nonparticipants (n = 19). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.1485; SD = 1.3251) and nonparticipants (M = 2.7932; SD = 1.2317); t(76) = 1.8749, p = 0.0647. These results suggest that participating in student success seminar does not have an influence on third-term grade point average based on earning a GED.

An unpaired t-test was conducted to compare the third–term grade point average of subgroups (i.e., No transfer intent) of student success seminar participants (n = 371) and nonparticipants (n = 164). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.2698; SD = 1.2816) and nonparticipants (M = 2.3436; SD = 1.776); t(533) = 0.5425, p = 0.5877. These results suggest

that participating in student success seminar does not have an influence on third-term grade point average based on no intent to transfer.

An unpaired t-test was conducted to compare the third–term grade point average of subgroups (i.e., Intent to transfer) of student success seminar participants (n = 677) and nonparticipants (n = 275). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.2271; SD = 1.1979) and nonparticipants (M = 2.2517; SD = 1.1004); t(939) = 0.2933, p = 0.7694. These results suggest that participating in student success seminar does not have an influence on third-term grade point average based on intent to transfer.

Table 9

Mean Third-Term Grade Point Average by Participation and Subgroup Identification

Subgroup	Participant			Nonparticipant		
	n	M	SD	n	M	SD
Total	1037	2.6634	0.8335	322	2.6117	0.8106
Age group						
Over 25	172	2.5998	1.3186	80	2.6438	1.1634
Under 25	865	2.1691	1.2016	359	2.2075	1.2292
Gender						
Female	573	2.3488	1.2305	262	2.4045	1.0496
Male	460	2.1121	1.2191	177	2.1172	1.2238
Ethnicity						
White	577	2.2315	1.2415	235	2.1969	1.148
Af. American	97	1.8481	1.2395	30	1.7397	1.1873
Asian/Pac. Islander	92	2.5215	1.209	53	2.6219	1.1322
Hispanic	11	1.6873	1.7098	1	1.9	0
Other	168	2.3696	1.199	85	2.3234	1.0286

Initial enrollment status						
Full-time (12 + hours)	829	2.3201	1.1941	249	2.2962	1.022
Part-time (< 12 hours)	208	2.1536	1.3135	190	2.2737	1.2618
High school performance						
High school graduate	960	2.2549	1.2215	415	2.2638	1.1207
GED recipient	59	2.1485	1.3251	19	2.7932	1.2317
Degree intent						
Did not plan to transfer	371	2.2698	1.2816	164	2.3436	1.776
Planned to transfer	666	2.2271	1.1979	275	2.2517	1.1004

An unpaired t-test was conducted to compare the second-year grade point average of subgroups (i.e., Over 25 years of age) of student success seminar participants (n = 138) and nonparticipants (n = 61). As indicated in Table 10, results show there was not a significant difference in grade point average between student success seminar participants (M = 2.508; SD = .96) and nonparticipants (M = 2.7477; SD = 1.0944); t(197) = 1.5546, p = 0.1217 over 25 years of age. These results suggest that participating in student success seminar does not have an influence on second-year grade point average based on being over 25 years of age.

An unpaired t-test was conducted to compare the second–year grade point average of subgroups (i.e., Under 25 years of age) of student success seminar participants (n = 628) and nonparticipants (n = 274). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.3558; SD = 1.1241) and nonparticipants (M = 2.273; SD = 1.1437); t(900) = 1.0120, p = 0.3118. These results suggest that participating in student success seminar does not have an influence on second-year grade point average based on being under 25 years of age.

An unpaired t-test was conducted to compare the second-year grade point average of subgroups (i.e., Female) of student success seminar participants (n = 416) and nonparticipants (n

= 201). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.5339; SD = 1.0948) and nonparticipants (M = 2.4372; SD = 1.0932); t(615) = 1.0287, p = 0.3040. These results suggest that participating in student success seminar does not have an influence on second-year grade point average based on being female.

An unpaired t-test was conducted to compare the second-year grade point average of subgroups (i.e., Male) of student success seminar participants (n = 338) and nonparticipants (n = 134). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.284; SD = 1.1339) and nonparticipants (M = 2.2397; SD = 1.2165); t(470) = 0.3748, p = 0.7080. These results suggest that participating in student success seminar does not have an influence on second-year grade point average based on being Male.

An unpaired t-test was conducted to compare the second-year grade point average of subgroups (i.e., White) of student success seminar participants (n = 430) and nonparticipants (n = 180). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.4543; SD = 1.1185) and nonparticipants (M = 2.3286; SD = 1.1447); t(608) = 1.1564, p = 0.2480. These results suggest that participating in student success seminar does not have an influence on second-year grade point average based on being White.

An unpaired t-test was conducted to compare the second-year grade point average of subgroups (i.e., African-American) of student success seminar participants (n = 62) and nonparticipants (n = 20). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.0292; SD = 1.1271) and

nonparticipants (M = 1.93; SD = 1.2543); t(80) = 0.3330, p = 0.7400. These results suggest that participating in student success seminar does not have an influence on second-year grade point average based on being African-American.

An unpaired t-test was conducted to compare the second-year grade point average of subgroups (i.e., Asian/Pacific Islander) of student success seminar participants (n = 71) and nonparticipants (n = 41). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.6807; SD = 1.1005) and nonparticipants (M = 2.7285; SD = .9627); t(110) = 0.2315, p = 0.8173. These results suggest that participating in student success seminar does not have an influence on second-year grade point average based on being Asian/Pacific Islander.

Because of the reduced number of Hispanic students remaining in the sample at the end of the second-year (participant n = 3 and nonparticipant n = 1), no analyses were conducted to examine whether or not participation in student success seminar impacted second-year grade point average for Hispanic students.

An unpaired t-test was conducted to compare the second-year grade point average of subgroups (i.e., Other ethnicity) of student success seminar participants (n = 123) and nonparticipants (n = 68). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.4537; SD = 1.0693) and nonparticipants (M = 2.2112; SD = 1.1687); t(189) = 1.4515, p = 0.1483. These results suggest that participating in student success seminar does not have an influence on second-year grade point average based on students identifying as Other ethnicity.

An unpaired t-test was conducted to compare the second-year grade point average of subgroups (i.e., 12 + Credit hours/Full-time) of student success seminar participants (n = 609)

and nonparticipants (n = 193). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.4142; SD = 1.0888) and nonparticipants (M = 2.4247; SD = 1.0384; t(800) = 0.1180, p = 0.9061. These results suggest that participating in student success seminar does not have an influence on second-year grade point average based on being enrolled in 12 or more credit hours.

An unpaired t-test was conducted to compare the second-year grade point average of subgroups (i.e., < 12 Credit hours/Part-time) of student success seminar participants (n = 157) and nonparticipants (n = 142). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.0534; SD = 1.3587) and nonparticipants (M = 2.2705; SD = 1.2742); t(297) = 1.4210, p = 0.1564. These results suggest that participating in student success seminar does not have an influence on second-year grade point average based on being enrolled in less than 12 credit hours.

An unpaired t-test was conducted to compare the second-year grade point average of subgroups (i.e., High school graduate) of student success seminar participants (n = 717) and nonparticipants (n = 314). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.3776; SD = 1.1454) and nonparticipants (M = 2.3384; SD = 1.1356); t(1029) = 0.5071, p = 0.6122. These results suggest that participating in student success seminar does not have an influence on second-year grade point average based on being a high school graduate.

An unpaired t-test was conducted to compare the second-year grade point average of subgroups (i.e., GED) of student success seminar participants (n = 33) and nonparticipants (n = 18). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.6973; SD = 1.1924) and nonparticipants (M =

2.6289; SD = 1.3656); t(49) = 0.1860, p = 0.8532. These results suggest that participating in student success seminar does not have an influence on second-year grade point average based on earning a GED.

An unpaired t-test was conducted to compare the second-year grade point average of subgroups (i.e., No transfer intent) of student success seminar participants (n = 278) and nonparticipants (n = 122). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.2819; SD = 1.2306) and nonparticipants (M = 2.3883; SD = 1.2308); t(398) = 0.7961, p = 0.4264. These results suggest that participating in student success seminar does not have an influence on second-year grade point average based on no intent to transfer.

An unpaired t-test was conducted to compare the second-year grade point average of subgroups (i.e., Intent to transfer) of student success seminar participants (n = 488) and nonparticipants (n = 213). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.4453; SD = 1.0985) and nonparticipants (M = 2.3431; SD = 1.099); t(699) = 1.1327, p = 0.2577. These results suggest that participating in student success seminar does not have an influence on second-year grade point average based on intent to transfer.

Table 10

Mean Second-Year Grade Point Average by Participation and Subgroup Identification

Subgroup	Participant			Nonparticipant		
	n	M	SD	n	M	SD
Total	653	2.7498	0.6891	215	2.6945	0.6513
Age group						
Over 25	138	2.508	.96	61	2.7477	1.0944
Under 25	628	2.3558	1.1241	274	2.273	1.1437
Gender						
Female	416	2.5339	1.0948	201	2.4372	1.0932
Male	338	2.284	1.1339	134	2.2397	1.2165
Ethnicity						
White	430	2.4543	1.1185	180	2.3286	1.1447
Af. American	62	2.0292	1.1271	20	1.93	1.2543
Asian/Pac. Islander	71	2.6807	1.1005	41	2.7285	0.9627
Hispanic	3	2.88	1.200	1	2.00	0
Other	123	2.4537	1.0693	68	2.2112	1.1687
Initial enrollment status						
Full-time (12 + hours)	609	2.4142	1.0888	193	2.4247	1.0384
Part-time (< 12 hours)	157	2.0534	1.3587	142	2.2705	1.2742
High school performance						
High school graduate	717	2.3776	1.1454	314	2.3384	1.1356
GED recipient	33	2.6973	1.1924	18	2.6289	1.3656
Degree intent						
Did not plan to transfer	278	2.2819	1.2306	122	2.3883	1.2308
Planned to transfer	488	2.4453	1.0985	213	2.3431	1.099

An unpaired t-test was conducted to compare the third-year grade point average of subgroups (i.e., Over 25 years of age) of student success seminar participants (n = 88) and

nonparticipants (n = 34). As indicated in Table 11, results show there was not a significant difference in grade point average between student success seminar participants (M = 2.845; SD = 1.167) and nonparticipants (M = 2.8635; SD = .7988); t(120) = 0.0850, p = 0.9324 over 25 years of age. These results suggest that participating in student success seminar does not have an influence on third-year grade point average based on being over 25 years of age.

An unpaired t-test was conducted to compare the third-year grade point average of subgroups (i.e., Under 25 years of age) of student success seminar participants (n = 377) and nonparticipants (n = 183). Results indicated that there was a significant difference in grade point average between student success seminar participants (M = 2.5056; SD = 1.125) and nonparticipants (M = 2.2609; SD = 1.109); t(558) = 2.4255, p = 0.0156. These results suggest that participating in student success seminar does not have an influence on third-year grade point average based on being under 25 years of age.

An unpaired t-test was conducted to compare the third-year grade point average of subgroups (i.e., Female) of student success seminar participants (n = 259) and nonparticipants (n = 140). Results indicated that there was a significant difference in grade point average between student success seminar participants (M = 2.63; SD = 1.1083) and nonparticipants (M = 2.3841; SD = 1.0827); t(397) = 2.1322, p = 0.0336. These results suggest that participating in student success seminar does have an influence on third-year grade point average based on being female.

An unpaired t-test was conducted to compare the third-year grade point average of subgroups (i.e., Male) of student success seminar participants (n = 194) and nonparticipants (n = 77). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.4468; SD = 1.1598) and nonparticipants (M = 2.2734; SD = 1.0954); t(269) = 1.1273, p = 0.2606. These results suggest that participating in

student success seminar does not have an influence on third-year grade point average based on being Male.

An unpaired t-test was conducted to compare the third-year grade point average of subgroups (i.e., White) of student success seminar participants (n = 248) and nonparticipants (n = 109). Results indicated that there was a significant difference in grade point average between student success seminar participants (M = 2.6382; SD = 1.1262) and nonparticipants (M = 2.2337; SD = 1.1074); t(355) = 3.1413, p = 0.0018. These results suggest that participating in student success seminar does have an influence on third-year grade point average based on being White.

An unpaired t-test was conducted to compare the third-year grade point average of subgroups (i.e., African-American) of student success seminar participants (n = 37) and nonparticipants (n = 11). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.1176; SD = 1.1599) and nonparticipants (M = 1.9855; SD = 1.2579); t(46) = 0.3255, p = 0.7463. These results suggest that participating in student success seminar does not have an influence on third-year grade point average based on being African-American.

An unpaired t-test was conducted to compare the third-year grade point average of subgroups (i.e., Asian/Pacific Islander) of student success seminar participants (n = 49) and nonparticipants (n = 30). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.5941; SD = .9837) and nonparticipants (M = 2.3253; SD = 1.2446); t(77) = 1.0644, p = 0.2905. These results suggest that participating in student success seminar does not have an influence on third-year grade point average based on being Asian/Pacific Islander.

Because of the reduced number of Hispanic students remaining in the sample at the end of the third-year (participant n = 6 and nonparticipant n = 0), no analyses were conducted to examine whether or not participation in student success seminar impacted third-year grade point average for Hispanic students.

An unpaired t-test was conducted to compare the third-year grade point average of subgroups (i.e., Other ethnicity) of student success seminar participants (n = 75) and nonparticipants (n = 49). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.4448; SD = 1.2523) and nonparticipants (M = 2.73; SD = .8029); t(122) = 1.4145, p = 0.1598. These results suggest that participating in student success seminar does not have an influence on third-year grade point average based on students identifying as Other ethnicity.

An unpaired t-test was conducted to compare the third-year grade point average of subgroups (i.e., 12 + Credit hours/Full-time) of student success seminar participants (n = 356) and nonparticipants (n = 129). Results indicated that there was a significant difference in grade point average between student success seminar participants (M = 2.5922; SD = 1.106) and nonparticipants (M = 2.2942; SD = 1.0264; t(483) = 2.6714, p = 0.0078. These results suggest that participating in student success seminar does have an influence on third-year grade point average based on being enrolled in 12 or more credit hours.

An unpaired t-test was conducted to compare the third-year grade point average of subgroups (i.e., < 12 Credit hours/Part-time) of student success seminar participants (n = 109) and nonparticipants (n = 88). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.4974; SD = 1.2425) and nonparticipants (M = 2.4448; SD = 1.1684); t(195) = .2521, p = 0.8013. These results

suggest that participating in student success seminar does not have an influence on third-year grade point average based on being enrolled in less than 12 credit hours.

An unpaired t-test was conducted to compare the third-year grade point average of subgroups (i.e., High school graduate) of student success seminar participants (n = 438) and nonparticipants (n = 206). Results indicated that there was a significant difference in grade point average between student success seminar participants (M = 2.5966; SD = 1.1058) and nonparticipants (M = 2.3253; SD = 1.0872); t(642) = 2.9196, p = 0.0036. These results suggest that participating in student success seminar does have an influence on third-year grade point average based on being a high school graduate.

An unpaired t-test was conducted to compare the third-year grade point average of subgroups (i.e., GED) of student success seminar participants (n = 21) and nonparticipants (n = 8). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.2757; SD = 1.474) and nonparticipants (M = 2.9875; SD = .8247); t(27) = 1.2821, p = 0.2107. These results suggest that participating in student success seminar does not have an influence on third-year grade point average based on earning a GED.

An unpaired t-test was conducted to compare the third-year grade point average of subgroups (i.e., No transfer intent) of student success seminar participants (n = 176) and nonparticipants (n = 72). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.598; SD = 1.1838) and nonparticipants (M = 2.4694; SD = 1.0927); t(246) = 0.7937, p = 0.4282. These results suggest that participating in student success seminar does not have an influence on third-year grade point average based on no intent to transfer.

An unpaired t-test was conducted to compare the third-year grade point average of subgroups (i.e., Intent to transfer) of student success seminar participants (n = 289) and nonparticipants (n = 145). Results indicated that there was a significant difference in grade point average between student success seminar participants (M = 2.5543; SD = 1.1105) and nonparticipants (M = 2.3014; SD = 1.0809); t(432) = 2.2577, p = 0.0245. These results suggest that participating in student success seminar does have an influence on third-year grade point average based on intent to transfer.

Table 11: Mean Third-Year Grade Point Average by Participation and Subgroup Identification

Subgroup	Participant			Nonparticipant		
	n	M	SD	n	M	SD
Total	355	2.7481	0.6407	131	2.6932	0.5968
Age group						
Over 25	88	2.845	1.167	34	2.8635	.7988
Under 25	377	2.5056	1.125**	183	2.2609	1.109**
Gender						
Female	259	2.63	1.1083**	140	2.3841	1.0827**
Male	194	2.4468	1.1598	77	2.2734	1.0954
Ethnicity						
White	248	2.6382	1.1262*	109	2.3286	1.1074*
Af. American	37	2.1176	1.1599	11	1.9855	1.2579
Asian/Pac. Islander	49	2.5941	.9837	30	2.3253	1.2446
Hispanic	6	2.3733	1.4013	0	0.0	0.0
Other	75	2.4448	1.2523	49	2.73	.8029
Initial enrollment status						
Full-time (12 + hours)	356	2.5922	1.106*	129	2.2942	1.0264*
Part-time (< 12 hours)	109	2.4974	1.2425	88	2.4448	1.1684

High school performance						
High school graduate	438	2.5966	1.1058*	206	2.3253	1.0872*
GED recipient	21	2.2757	1.474	8	2.9875	.8247
Degree intent						
Did not plan to transfer	176	2.598	1.1838	72	2.4694	1.0927
Planned to transfer	289	2.5543	1.1105**	145	2.3014	1.0809**

p < .05**
P < .01*

An unpaired t-test was conducted to compare the fourth-year grade point average of subgroups (i.e., Over 25 years of age) of student success seminar participants (n = 33) and nonparticipants (n = 19). As indicated in Table 12, results show there was not a significant difference in grade point average between student success seminar participants (M = 2.8342; SD = 1.2328) and nonparticipants (M = 2.9984; SD = 1.1795); t(50) = 0.4697, p = 0.6406 over 25 years of age. These results suggest that participating in student success seminar does not have an influence on fourth-year grade point average based on being over 25 years of age.

An unpaired t-test was conducted to compare the fourth-year grade point average of subgroups (i.e., Under 25 years of age) of student success seminar participants (n = 171) and nonparticipants (n = 91). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.5552; SD = 1.1835) and nonparticipants (M = 2.3688; SD = 1.1329); t(260) = 1.2318, p = 0.2191. These results suggest that participating in student success seminar does not have an influence on fourth-year grade point average based on being under 25 years of age.

An unpaired t-test was conducted to compare the fourth-year grade point average of subgroups (i.e., Female) of student success seminar participants (n = 111) and nonparticipants (n = 74). Results indicated that there was not a significant difference in grade point average

between student success seminar participants (M = 2.7848; SD = 1.0418) and nonparticipants (M = 2.6154; SD = 1.1036); t(183) = 1.0580, p = 0.2914. These results suggest that participating in student success seminar does not have an influence on fourth-year grade point average based on being female.

An unpaired t-test was conducted to compare the fourth-year grade point average of subgroups (i.e., Male) of student success seminar participants (n = 92) and nonparticipants (n = 36). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.3683; SD = 1.319) and nonparticipants (M = 2.1839; SD = 1.2275); t(126) = 0.7248, p = 0.4699. These results suggest that participating in student success seminar does not have an influence on fourth-year grade point average based on being Male.

An unpaired t-test was conducted to compare the fourth-year grade point average of subgroups (i.e., White) of student success seminar participants (n = 114) and nonparticipants (n = 53). Results indicated that there was a significant difference in grade point average between student success seminar participants (M = 2.7488; SD = 1.1477) and nonparticipants (M = 2.2853; SD = 1.2523); t(165) = 2.3593, p = 0.0195. These results suggest that participating in student success seminar does have an influence on fourth-year grade point average based on being White.

An unpaired t-test was conducted to compare the fourth-year grade point average of subgroups (i.e., African-American) of student success seminar participants (n = 18) and nonparticipants (n = 3). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.3756; SD = 1.2857) and nonparticipants (M = 2.0233; SD = 1.8096); t(19) = 0.4183, p = 0.6804. These results suggest

that participating in student success seminar does not have an influence on fourth-year grade point average based on being African-American.

An unpaired t-test was conducted to compare the fourth-year grade point average of subgroups (i.e., Asian/Pacific Islander) of student success seminar participants (n = 22) and nonparticipants (n = 12). Results indicated that there was not a significant difference in grade point average for student success seminar participants (M = 2.2382; SD = 1.1815) and nonparticipants (M = 2.7083; SD = 1.4155); t(32) = 1.0340, p = 0.3089. These results suggest that participating in student success seminar does not have an influence on fourth-year grade point average based on being Asian/Pacific Islander.

Because of the reduced number of Hispanic students remaining in the sample at the end of the fourth-year (participant n = 2 and nonparticipant n = 0), no analyses were conducted to examine whether or not participation in student success seminar impacted fourth-year grade point average for Hispanic students.

An unpaired t-test was conducted to compare the fourth-year grade point average of subgroups (i.e., Other ethnicity) of student success seminar participants (n = 31) and nonparticipants (n = 30). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.4023; SD = 1.2358) and nonparticipants (M = 2.6067; SD = .8941); t(59) = 0.7380, p = 0.4634. These results suggest that participating in student success seminar does not have an influence on fourth-year grade point average based on students identifying as Other ethnicity.

An unpaired t-test was conducted to compare the fourth-year grade point average of subgroups (i.e., 12 + Credit hours/Full-time) of student success seminar participants (n = 157) and nonparticipants (n = 56). Results indicated that there was not a significant difference in

grade point average between student success seminar participants (M = 2.633; SD = 1.139) and nonparticipants (M = 2.4693; SD = 1.0984; t(211) = 0.9319, p = 0.3524. These results suggest that participating in student success seminar does not have an influence on fourth-year grade point average based on being enrolled in 12 or more credit hours.

An unpaired t-test was conducted to compare the fourth-year grade point average of subgroups (i.e., < 12 Credit hours/Part-time) of student success seminar participants (n = 47) and nonparticipants (n = 54). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.4981; SD = 1.3613) and nonparticipants (M = 2.4815; SD = 1.2237); t(99) = 0.0645, p = 0.9487. These results suggest that participating in student success seminar does not have an influence on fourth-year grade point average based on being enrolled in less than 12 credit hours.

An unpaired t-test was conducted to compare the fourth-year grade point average of subgroups (i.e., High school graduate) of student success seminar participants (n = 194) and nonparticipants (n = 102). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.5913; SD = 1.1765) and nonparticipants (M = 2.4675; SD = 1.1649); t(294) = 0.8633, p = 0.3887. These results suggest that participating in student success seminar does not have an influence on fourth-year grade point average based on being a high school graduate.

An unpaired t-test was conducted to compare the fourth-year grade point average of subgroups (i.e., GED) of student success seminar participants (n = 8) and nonparticipants (n = 8). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 3.0175; SD = 1.3477) and nonparticipants (M = 2.57; SD = 1.0989); t(14) = 0.7279, p = 0.4787. These results suggest that participating in student

success seminar does not have an influence on fourth-year grade point average based on earning a GED.

An unpaired t-test was conducted to compare the fourth-year grade point average of subgroups (i.e., No transfer intent) of student success seminar participants (n = 74) and nonparticipants (n = 47). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.7845; SD = 1.2068) and nonparticipants (M = 2.8704; SD = 1.1488); t(119) = 0.3887, p = 0.6982. These results suggest that participating in student success seminar does not have an influence on fourth-year grade point average based on no intent to transfer.

An unpaired t-test was conducted to compare the fourth-year grade point average of subgroups (i.e., Intent to transfer) of student success seminar participants (n = 130) and nonparticipants (n = 63). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 2.4943; SD = 1.1723) and nonparticipants (M = 2.1775; SD = 1.0772); t(191) = 1.8066, p = 0.0724. These results suggest that participating in student success seminar does not have an influence on fourth-year grade point average based on intent to transfer.

Table 12

Mean Fourth-Year Grade Point Average by Participation and Subgroup Identification

Subgroup	Participant			Nonparticipant		
	n	M	SD	n	M	SD
Total	167	2.7381	0.6317	63	2.7746	0.5305
Age group						
Over 25	33	2.8342	1.2328	19	2.9984	1.1795
Under 25	171	2.5552	1.1835	91	2.3688	1.1329
Gender						
Female	111	2.7848	1.0418	74	2.6154	1.1036
Male	92	2.3683	1.319	36	2.1839	1.2275
Ethnicity						
White	114	2.7488	1.1262**	53	2.2853	1.2523**
Af. American	18	2.3756	1.2857	3	2.0233	1.8096
Asian/Pac. Islander	22	2.2382	1.1815	12	2.7083	1.4155
Hispanic	2	.615	.8697	0	0.0	0.0
Other	31	2.4023	1.2358	30	2.6067	.8941
Initial enrollment status						
Full-time (12 + hours)	157	2.633	1.139	56	2.4693	1.0984
Part-time (< 12 hours)	47	2.4981	1.3613	54	2.4815	1.2237
High school performance						
High school graduate	194	2.5913	1.1765	102	2.4675	1.1649
GED recipient	8	3.0175	1.3477	8	2.57	1.0989
Degree intent						
Did not plan to transfer	74	2.7845	1.2068	47	2.8704	1.1488
Planned to transfer	130	2.4943	1.1723	63	2.1775	1.0772

p < .05**

Research Question II. How did participation in a community college student success seminar influence credit hour completion compared to nonparticipants?

(a) There was no significant difference in first-term credit hour completion percentages of participants when compared to nonparticipants;

(b) There was no significant difference in the second-term credit hour completion percentages of participants when compared to nonparticipants;

(c) There was no significant difference in the third-term credit hour completion percentages of participants when compared to nonparticipants;

(d) There was no significant difference in the second-year credit hour completion percentages of participants when compared to nonparticipants;

(e) There was no significant difference in the third-year credit hour completion percentages of participants when compared to nonparticipants; and

(f) There was no significant difference in the fourth-year credit hour completion percentages of participants when compared to nonparticipants.

Hypothesis IIa. An unpaired t-test was conducted to compare the first-term credit hours earned of student success seminar participants and nonparticipants. Due to the similarities of the 2007, 2008, and 2009 populations of participants and nonparticipants, the three cohorts were combined providing for a larger n (participants n = 1353; nonparticipants n = 568). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.2525; SD = 4.1751) and nonparticipants (M = 11.1537; SD = 3.9233); $t(1919) = 0.4817$, $p = 0.6301$. These results suggest that participating in student success seminar does not influence first-term credit hours earned.

Hypothesis IIb. An unpaired t-test was conducted to compare the second-term credit hours earned of student success seminar participants (n = 1159) and nonparticipants (n = 369). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.8018; SD = 3.9483) and nonparticipants (M = 11.5854; SD = 3.8131); t(1526) = 0.9245, p = 0.3554. These results suggest that participating in student success seminar does not have an influence on second-term credit hours earned.

Hypothesis IIc. An unpaired t-test was conducted to compare the third-term credit hours earned of student success seminar participants (n = 1037) and nonparticipants (n = 322). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.3594; SD = 3.9588) and nonparticipants (M = 11.0212; SD = 3.982); t(1357) = 1.3373, p = 0.1814. These results suggest that participating in student success seminar does not have an influence on third-term credit hours earned.

Hypothesis IId. An unpaired t-test was conducted to compare the second-year credit hours earned of student success seminar participants (n = 653) and nonparticipants (n = 215). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.5431; SD = 4.4958) and nonparticipants (M = 11.5624; SD = 4.3036); t(866) = 0.0552, p = 0.9560. These results suggest that participating in student success seminar does not have an influence on second-year grade credit hours earned.

Hypothesis IIe. An unpaired t-test was conducted to compare the third-year credit hours earned of student success seminar participants (n = 355) and nonparticipants (n = 131). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.0786; SD = 4.1752) and nonparticipants (M = 10.5709; SD

= 4.1917); t(484) = 1.1882, p = 0.2353. These results suggest that participating in student success seminar does not have an influence on third-year credit hours earned.

Hypothesis IIf. An unpaired t-test was conducted to compare the fourth-year credit hours earned of student success seminar participants (n = 167) and nonparticipants (n = 63). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 10.0832; SD = 3.9669) and nonparticipants (M = 9.4913; SD = 3.8753); t(228) = 1.0155, p = 0.3110. These results suggest that participating in student success seminar does not have an influence on fourth-year credit hours earned.

Subgroups. Additional unpaired t-tests were conducted to explore whether or not participating in a student success seminar impacted the credit hours earned of subgroups of students differently according to age, gender, ethnicity, initial enrollment status, high school performance, and degree intent. Again, due to the similarities of the 2007, 2008, and 2009 populations of participants and nonparticipants, the three cohorts were combined providing for a larger n (participants n = 1353; nonparticipants n = 568).

An unpaired t-test was conducted to compare the first-term credit hours earned of subgroups (i.e., Over 25 years of age) of student success seminar participants (n = 237) and nonparticipants (n = 100). As indicated in Table 13, results show there was not a significant difference in credit hours earned between student success seminar participants (M = 10.9431; SD = 3.7418) and nonparticipants (M = 10.5624; SD = 3.4777); t(335) = .8709, p = 0.3844 over 25 years of age. These results suggest that participating in student success seminar does not have an influence on first-term credit hours earned based on being over 25 years of age.

An unpaired t-test was conducted to compare the first-term credit hours earned of subgroups (i.e., Under 25 years of age) of student success seminar participants (n = 1116) and

nonparticipants (n = 468). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.3188; SD = 4.261) and nonparticipants (M = 11.2807; SD = 4.0044); t(1582) = 0.1652, p = 0.8688. These results suggest that participating in student success seminar does not have an influence on first-term credit hours earned based on being under 25 years of age.

An unpaired t-test was conducted to compare the first–term grade credit hours earned of subgroups (i.e., Female) of student success seminar participants (n = 722) and nonparticipants (N = 331). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.1949; SD = 4.0298) and nonparticipants (M = 11.6765; SD = 3.7465); t(1051) = 1.8400, p = 0.0660. These results suggest that participating in student success seminar does not have an influence on first-term credit hours earned based on being female.

An unpaired t-test was conducted to compare the first–term credit hours earned of subgroups (i.e., Male) of student success seminar participants (n = 604) and nonparticipants (n = 237). Results indicated that there was a significant difference in credit hours earned between student success seminar participants (M = 11.3727; SD = 4.3345) and nonparticipants (M = 10.4181; SD = 4.0507); t(839) = 2.9259, p = 0.0035. These results suggest that participating in student success seminar has an influence on first-term credit hours earned based on being male.

An unpaired t-test was conducted to compare the first–term credit hours earned of subgroups (i.e., White) of student success seminar participants (n = 754) and nonparticipants (n = 306). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.3085; SD = 4.1398) and nonparticipants (M = 11.1902; SD = 3.9382); t(1058) = .4275, p = 0.6691. These results suggest that participating in

student success seminar does not have an influence on first-term credit hours earned based on being White.

An unpaired t-test was conducted to compare the first–term credit hours earned of subgroups (i.e., African-American) of student success seminar participants (n = 128) and nonparticipants (n = 39). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 10.1091; SD = 4.7815) and nonparticipants (M = 9.6151; SD = 4.1176); t(165) = .5825, p = 0.5611. These results suggest that participating in student success seminar does not have an influence on first-term credit hours earned based on being African-American.

An unpaired t-test was conducted to compare the first–term credit hours earned of subgroups (i.e., Asian/Pacific Islander) of student success seminar participants (n = 99) and nonparticipants (n = 66). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 12.9994; SD = 3.637) and nonparticipants (M = 11.9086; SD = 4.0112); t(163) = 1.8108, p = 0.0720. These results suggest that participating in student success seminar does not have an influence on first-term credit hours earned based on being Asian/Pacific Islander.

An unpaired t-test was conducted to compare the first–term credit hours earned of subgroups (i.e., Hispanic) of student success seminar participants (n = 17) and nonparticipants (n = 6). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 9.0006; SD = 4.6369) and nonparticipants (M = 12.3333; SD = 5.7498); t(21) = 1.4251, p = 0.1688. These results suggest that participating in student success seminar does not have an influence on first-term credit hours earned based on being Hispanic.

An unpaired t-test was conducted to compare the first–term credit hours earned of subgroups (i.e., Other ethnicity) of student success seminar participants (n = 214) and nonparticipants (n = 103). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.3392; SD = 3.7822) and nonparticipants (M = 11.0126; SD = 3.8849); t(315) = 0.7137, p = 0.4759. These results suggest that participating in student success seminar does not have an influence on first-term credit hours earned based on the racial identification of Other.

An unpaired t-test was conducted to compare the first–term credit hours earned of subgroups (i.e., 12 + credit hours) of student success seminar participants (n = 1029) and nonparticipants (n = 306). Results indicated that there was a significant difference in credit hours earned between student success seminar participants (M = 12.6242; SD = 3.5639) and nonparticipants (M = 13.3368; SD = 3.5472); t(1333) = 3.0741, p = 0.0022. These results suggest that participating in student success seminar has an influence on first-term credit hours earned based on being a full-time student.

An unpaired t-test was conducted to compare the first–term credit hours earned of subgroups (i.e., < 12 credit hours) of student success seminar participants (n = 324) and nonparticipants (n = 262). Results indicated that there was a significant difference in credit hours earned between student success seminar participants (M = 6.8869; SD = 2.72) and nonparticipants (M = 8.6004; SD = 2.8609); t(584) = 7.4082, p = 0.0001. These results suggest that participating in student success seminar does not have an influence on first-term credit hours earned based on being a part-time student. In other words, part-time student's that did not participate earned a significantly higher number of credit hours in the first term than participants.

An unpaired t-test was conducted to compare the first–term credit hours earned of subgroups (i.e., High School Graduate) of student success seminar participants (n = 1244) and nonparticipants (n = 532). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.2958; SD = 4.1565) and nonparticipants (M = 11.2402; SD = 3.9115); t(1774) = 0.2628, p = 0.7928. These results suggest that participating in student success seminar does not have an influence on first-term credit hours earned based on graduating high school.

An unpaired t-test was conducted to compare the first–term credit hours earned of subgroups (i.e., GED) of student success seminar participants (n = 88) and nonparticipants (n = 27). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 10.1141; SD = 4.1795) and nonparticipants (M = 10.2193; SD = 4.125); t(113) = 0.1148, p = 0.9088. These results suggest that participating in student success seminar does not have an influence on first-term credit hours earned based on earning a GED.

An unpaired t-test was conducted to compare the first–term credit hours earned of subgroups (i.e., Do not plan to transfer) of student success seminar participants (n = 507) and nonparticipants (n = 221). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 10.5189; SD = 3.9647) and nonparticipants (M = 10.6724; SD = 3.7422); t(726) = 0.4885, p = 0.6254. These results suggest that participating in student success seminar does not have an influence on first-term credit hours earned based on no intent to transfer.

An unpaired t-test was conducted to compare the first–term credit hours earned of subgroups (i.e., Plan to transfer) of student success seminar participants (n = 846) and

nonparticipants (n = 347). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.6892; SD = 4.2394) and nonparticipants (M = 11.462; SD = 4.012); t(1191) = .8537, p = 0.3934. These results suggest that participating in student success seminar does not have an influence on first-term credit hours earned based on intent to transfer.

Table 13

Mean First-Term Credit Hours Earned by Participation and Subgroup Identification

Subgroup	Participant			Nonparticipant		
	n	M	SD	n	M	SD
Total	1353	11.2525	4.1751	568	11.1537	3.9233
Age group						
Over 25	237	10.9431	3.7418	100	10.5624	3.4777
Under 25	1116	11.3188	4.261	468	11.2807	4.0044
Gender						
Female	722	11.1949	4.0298	331	11.6765	3.7465
Male	604	11.3727	4.3345*	237	10.4181	4.0507*
Ethnicity						
White	754	11.3085	4.1398	306	11.1902	3.9382
Af. American	128	10.1091	4.7815	39	9.6151	4.1176
Asian/Pac. Islander	99	12.9994	3.637	66	11.9086	4.0112
Hispanic	17	9.0006	4.6369	6	12.3333	5.7498
Other	214	11.3392	3.7822	103	11.0126	3.8849
Initial enrollment status						
Full-time (12 + hours)	1029	12.6242	3.5639*	306	13.3368	3.5472*
Part-time (< 12 hours)	324	6.8869	2.72*	262	8.6004	2.8609*
High school performance						
High school graduate	1244	11.2958	4.156	532	11.2402	3.9115
GED recipient	88	10.1141	4.1795	27	10.2193	4.125

Degree intent						
Did not plan to transfer	507	10.5189	3.9647	221	10.6724	3.7422
Planned to transfer	846	11.6892	4.2394	347	11.4626	4.012

p = (< .01)*

An unpaired t-test was conducted to compare the second-term credit hours earned of subgroups (i.e., Over 25 years of age) of student success seminar participants (n = 180) and nonparticipants (n = 79). As indicated in Table 14, results show there was not a significant difference in credit hours earned between student success seminar participants (M = 11.5622; SD = 3.6367) and nonparticipants (M = 10.8471; SD = 3.7284); t(257) = 1.4458, p = 0.1494 over 25 years of age. These results suggest that participating in student success seminar does not have an influence on second-term credit hours earned based on being over 25 years of age.

An unpaired t-test was conducted to compare the second–term credit hours earned of subgroups (i.e., Under 25 years of age) of student success seminar participants (n = 869) and nonparticipants (n = 380). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.8603; SD = 4.0058) and nonparticipants (M = 11.7396; SD = 3.80); t(1247) = 0.4976, p = 0.6189. These results suggest that participating in student success seminar does not have an influence on second-term credit hours earned based on being under 25 years of age.

An unpaired t-test was conducted to compare the second–term grade credit hours earned of subgroups (i.e., Female) of student success seminar participants (n = 572) and nonparticipants (N = 281). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 12.0131; SD = 3.6968) and nonparticipants (M = 11.8083; SD = 4.0098); t(851) = 0.7393, p = 0.4599. These results suggest that

participating in student success seminar does not have an influence on second-term credit hours earned based on being female.

An unpaired t-test was conducted to compare the second–term credit hours earned of subgroups (i.e., Male) of student success seminar participants (n = 464) and nonparticipants (n = 178). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.7372; SD = 4.1256) and nonparticipants (M = 11.2343; SD = 3.4269); t(640) = 1.4460, p = 0.1487. These results suggest that participating in student success seminar does not have an influence on second-term credit hours earned based on being male.

An unpaired t-test was conducted to compare the second–term credit hours earned of subgroups (i.e., White) of student success seminar participants (n = 586) and nonparticipants (n = 241). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.881; SD = 3.8858) and nonparticipants (M = 11.5904; SD = 3.56); t(825) = 1.0010, p = 0.3171. These results suggest that participating in student success seminar does not have an influence on second-term credit hours earned based on being White.

An unpaired t-test was conducted to compare the second–term credit hours earned of subgroups (i.e., African-American) of student success seminar participants (n = 92) and nonparticipants (n = 34). Results indicated that there was a significant difference in credit hours earned between student success seminar participants (M = 11.1963; SD = 4.0291) and nonparticipants (M = 7.8803; SD = 3.9326); t(124) = 4.1267, p = 0.0001. These results suggest that participating in student success seminar has an influence on second-term credit hours earned based on being African-American.

An unpaired t-test was conducted to compare the second–term credit hours earned of subgroups (i.e., Asian/Pacific Islander) of student success seminar participants (n = 92) and nonparticipants (n = 54). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 13.24; SD = 3.6714) and nonparticipants (M = 13.3878; SD = 3.549); t(144) = 0.2377, p = 0.8124. These results suggest that participating in student success seminar does not have an influence on second-term credit hours earned based on being Asian/Pacific Islander.

An unpaired t-test was conducted to compare the second–term credit hours earned of subgroups (i.e., Hispanic) of student success seminar participants (n = 11) and nonparticipants (n = 2). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.2727; SD = 3.508) and nonparticipants (M = 9.00; SD = 5.6569); t(11) = 0.7875, p = 0.4477. These results suggest that participating in student success seminar does not have an influence on second-term credit hours earned based on being Hispanic.

An unpaired t-test was conducted to compare the second–term credit hours earned of subgroups (i.e., Other) of student success seminar participants (n = 171) and nonparticipants (n = 90). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.7744; SD = 3.9915) and nonparticipants (M = 12.1251; SD = 3.4813); t(259) = 0.7043, p = 0.4819. These results suggest that participating in student success seminar does not have an influence on second-term credit hours earned based on the racial identification of Other.

An unpaired t-test was conducted to compare the second–term credit hours earned of subgroups (i.e., 12 + credit hours) of student success seminar participants (n = 843) and

nonparticipants (n = 261). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 12.3201; SD = 3.7781) and nonparticipants (M = 12.4582; SD = 3.6019); t(1102) = 0.5217, p = 0.6020. These results suggest that participating in student success seminar does not have an influence on second-term credit hours earned based on being a full-time student.

An unpaired t-test was conducted to compare the second–term credit hours earned of subgroups (i.e., < 12 credit hours) of student success seminar participants (n = 206) and nonparticipants (n = 198). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 9.729; SD = 3.9225) and nonparticipants (M = 10.4338; SD = 3.7532); t(402) = 1.8440, p = 0.0659. These results suggest that participating in student success seminar does not have an influence on second-term credit hours earned based on being a part-time student.

An unpaired t-test was conducted to compare the second–term credit hours earned of subgroups (i.e., High School Graduate) of student success seminar participants (n = 973) and nonparticipants (n = 433). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.8118; SD = 3.9643) and nonparticipants (M = 11.5976; SD = 3.8476); t(1404) = 0.9438, p = 0.3454. These results suggest that participating in student success seminar does not have an influence on second-term credit hours earned based on graduating high school.

An unpaired t-test was conducted to compare the second–term credit hours earned of subgroups (i.e., GED) of student success seminar participants (n = 58) and nonparticipants (n = 20). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.2595; SD = 3.626) and nonparticipants (M = 11.70;

SD = 2.9209); t(76) = 0.4905, p = 0.6252. These results suggest that participating in student success seminar does not have an influence on second-term credit hours earned based on earning a GED.

An unpaired t-test was conducted to compare the second–term credit hours earned of subgroups (i.e., Do not plan to transfer) of student success seminar participants (n = 378) and nonparticipants (n = 171). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 10.9905; SD = 3.798) and nonparticipants (M = 11.1919; SD = 3.8721); t(547) = 0.5719, p = 0.5676. These results suggest that participating in student success seminar does not have an influence on second-term credit hours earned based on no intent to transfer.

An unpaired t-test was conducted to compare the second–term credit hours earned of subgroups (i.e., Plan to transfer) of student success seminar participants (n = 671) and nonparticipants (n = 288). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 12.2737; SD = 3.9516) and nonparticipants (M = 11.8172; SD = 7.6629); t(957) = 1.2130, p = 0.2254. These results suggest that participating in student success seminar does not have an influence on second-term credit hours earned based on intent to transfer.

Table 14

Mean Second-Term Credit Hours Earned by Participation and Subgroup Identification

Subgroup	Participant			Nonparticipant		
	n	M	SD	n	M	SD
Total	1159	11.8018	3.9483	369	12.3363	3.8131
Age group						
Over 25	180	11.5622	3.6367	79	10.8471	3.7284
Under 25	869	11.8603	4.0058	380	11.7396	3.80
Gender						
Female	572	12.0131	3.6968	281	11.8083	4.0098
Male	464	11.7372	4.1256	178	11.2343	3.4269
Ethnicity						
White	586	11.881	3.8858	241	11.5904	3.56
Af. American	92	11.1963	4.0291*	34	7.8803	3.9326*
Asian/Pac. Islander	92	13.24	3.6714	54	13.3878	3.549
Hispanic	11	11.2727	3.508	2	9.00	5.6569
Other	171	11.7744	3.9915	90	12.1251	3.4813
Initial enrollment status						
Full-time (12 + hours)	843	12.3201	3.7781	261	12.4582	3.6019
Part-time (< 12 hours)	206	9.729	3.9225	198	10.4338	3.7532
High school performance						
High school graduate	973	11.8118	3.9643	433	11.5976	3.8476
GED recipient	58	11.2595	3.626	20	11.70	2.9209
Degree intent						
Did not plan to transfer	378	10.9905	3.798	171	11.1919	3.8721
Planned to transfer	671	12.2737	3.9516	288	11.8172	7.6629

p = (< .01)*

An unpaired t-test was conducted to compare the third-term credit hours earned of subgroups (i.e., Over 25 years of age) of student success seminar participants (n = 159) and

nonparticipants (n = 76). As indicated in Table 15, results show there was not a significant difference in credit hours earned between student success seminar participants (M = 10.9447; SD = 3.7152) and nonparticipants (M = 10.4361; SD = 3.8777); t(233) = 0.9678, p = 0.3341 over 25 years of age. These results suggest that participating in student success seminar does not have an influence on third-term credit hours earned based on being over 25 years of age.

An unpaired t-test was conducted to compare the third–term credit hours earned of subgroups (i.e., Under 25 years of age) of student success seminar participants (n = 756) and nonparticipants (n = 328). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.4672; SD = 3.9919) and nonparticipants (M = 11.1629; SD = 4.0028); t(1082) = 1.1520, p = 0.2496. These results suggest that participating in student success seminar does not have an influence on third-term credit hours earned based on being under 25 years of age.

An unpaired t-test was conducted to compare the third–term credit hours earned of subgroups (i.e., Female) of student success seminar participants (n = 506) and nonparticipants (n = 246). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.5147; SD = 3.9431) and nonparticipants (M = 11.098; SD = 4.0591); t(750) = 1.3466, p = 0.1785. These results suggest that participating in student success seminar does not have an influence on third-term credit hours earned based on being female.

An unpaired t-test was conducted to compare the third–term credit hours earned of subgroups (i.e., Male) of student success seminar participants (n = 395) and nonparticipants (n = 158). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 11.4152; SD = 3.8483) and nonparticipants (M =

10.9115; SD = 3.8609); t(551) = 1.3892, p = 0.1653. These results suggest that participating in student success seminar does not have an influence on third-term grade credit hours earned based on being male.

An unpaired t-test was conducted to compare the third–term grade credit hours earned of subgroups (i.e., White) of student success seminar participants (n = 502) and nonparticipants (n = 215). Results indicated that there was a significant difference in credit hours earned between student success seminar participants (M = 11.2878; SD = 3.951) and nonparticipants (M = 10.641; SD = 4.0171); t(715) = 1.9984, p = 0.0460. These results suggest that participating in student success seminar has an influence on third-term credit hours earned based on being White.

An unpaired t-test was conducted to compare the third–term credit hours earned of subgroups (i.e., African-American) of student success seminar participants (n = 77) and nonparticipants (n = 24). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.3665; SD = 4.03) and nonparticipants (M = 9.9188; SD = 4.684); t(99) = 1.4776, p = 0.1427. These results suggest that participating in student success seminar does not have an influence on third-term credit hours earned based on being African-American.

An unpaired t-test was conducted to compare the third–term credit hours earned of subgroups (i.e., Asian/Pacific Islander) of student success seminar participants (n = 81) and nonparticipants (n = 50). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 12.5667; SD = 3.6809) and nonparticipants (M = 12.5582; SD = 3.7376); t(129) = 0.0128, p = 0.9898. These results suggest that participating in student success seminar does not have an influence on third-term credit hours earned based on being Asian/Pacific Islander.

Because of the reduced number of Hispanic students remaining in the sample at the end of the third-term (participant n = 6 and nonparticipant n = 1), no analyses were conducted to examine whether or not participation in student success seminar impacted third-term credit hours earned for Hispanic students.

An unpaired t-test was conducted to compare the third–term credit hours earned of subgroups (i.e., Other ethnicity) of student success seminar participants (n = 156) and nonparticipants (n = 79). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.6346; SD = 3.8005) and nonparticipants (M = 11.2663; SD = 3.6889); t(233) = 0.7087, p = 0.4792. These results suggest that participating in student success seminar does not have an influence on third-term credit hours earned for students identifying as Other ethnicity.

An unpaired t-test was conducted to compare the third–term credit hours earned of subgroups (i.e., 12 + Credit hours/Full-time) of student success seminar participants (n = 741) and nonparticipants (n = 237). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 11.8574; SD = 3.7977) and nonparticipants (M = 11.6918; SD = 4.0814); t(976) = 0.5737, p = 0.5663. These results suggest that participating in student success seminar does not have an influence on third-term credit hours earned based on being enrolled in 12 or more credit hours.

An unpaired t-test was conducted to compare the third–term grade credit hours earned of subgroups (i.e., < 12 Credit hours/Part-time) of student success seminar participants (n = 174) and nonparticipants (n = 167). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 9.3114; SD = 3.9287) and nonparticipants (M = 10.0798; SD = 3.656); t(339) = 1.8678, p = 0.0627. These results suggest

that participating in student success seminar does not have an influence on third-term credit hours earned based on being enrolled in less than 12 credit hours.

An unpaired t-test was conducted to compare the third–term credit hours earned of subgroups (i.e., High school graduate) of student success seminar participants (n = 851) and nonparticipants (n = 382). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.3897; SD = 3.9763) and nonparticipants (M = 11.0247; SD = 3.9858); t(1231) = 1.4894, p = 0.1366. These results suggest that participating in student success seminar does not have an influence on third-term credit hours earned based on being a high school graduate.

An unpaired t-test was conducted to compare the third–term credit hours earned of subgroups (i.e., GED) of student success seminar participants (n = 19) and nonparticipants (n = 18). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 10.3174; SD = 3.9775) and nonparticipants (M = 11.2789; SD = 3.7207); t(35) = 0.7583, p = 0.4533. These results suggest that participating in student success seminar does not have an influence on third-term credit hours earned based on earning a GED.

An unpaired t-test was conducted to compare the third–term credit hours earned of subgroups (i.e., No transfer intent) of student success seminar participants (n = 332) and nonparticipants (n = 152). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 10.6867; SD = 3.7985) and nonparticipants (M = 10.3453; SD = 3.9716); t(482) = 0.9046, p = 0.3661. These results suggest that participating in student success seminar does not have an influence on third-term credit hours earned based on no intent to transfer.

An unpaired t-test was conducted to compare the third–term credit hours earned of subgroups (i.e., Intent to transfer) of student success seminar participants (n = 583) and nonparticipants (n = 252). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.7671; SD = 3.9853) and nonparticipants (M = 11.4339; SD = 3.9435); t(833) = 1.1125, p = 0.2662. These results suggest that participating in student success seminar does not have an influence on third-term credit hours earned based on intent to transfer.

Table 15

Mean Third-Term credit hours earned by Participation and Subgroup Identification

Subgroup	Participant			Nonparticipant		
	n	M	SD	n	M	SD
Total	1037	11.3594	0.8335	322	11.0212	3.982
Age group						
Over 25	159	10.9447	3.7152	76	10.4361	3.8777
Under 25	756	11.4672	3.9919	328	11.1629	4.0028
Gender						
Female	506	11.5147	3.9431	246	11.098	4.0591
Male	395	11.4152	3.8483	158	10.9115	3.8609
Ethnicity						
White	502	11.2878	3.951**	215	10.641	4.0171**
Af. American	77	11.3665	4.03	24	9.9188	4.684
Asian/Pac. Islander	81	12.5667	3.6809	50	12.5582	3.7376
Hispanic	6	10.00	4.5589	1	15.00	0
Other	156	11.6346	3.8005	79	11.2663	3.6889
Initial enrollment status						
Full-time (12 + hours)	741	11.8574	3.7977	237	11.6918	4.0814
Part-time (< 12 hours)	174	9.3114	3.9287	167	10.0798	3.656

High school performance						
High school graduate	851	11.3897	3.9763	382	11.0247	3.9858
GED recipient	19	10.3174	3.9775	18	11.2789	3.7207
Degree intent						
Did not plan to transfer	332	10.6867	3.7985	152	10.3453	3.9716
Planned to transfer	583	11.7671	3.9853	252	11.4339	3.9435

p = (< .05)**

An unpaired t-test was conducted to compare the second-year credit hours earned of subgroups (i.e., Over 25 years of age) of student success seminar participants (n = 131) and nonparticipants (n = 59). As indicated in Table 16, results show there was not a significant difference in credit hours earned between student success seminar participants (M = 10.6437; SD = 3.7942) and nonparticipants (M = 11.5425; SD = 3.6069); t(188) = 1.5338, p = 0.1268. These results suggest that participating in student success seminar does not have an influence on second-year credit hours earned based on being over 25 years of age.

An unpaired t-test was conducted to compare the second–year credit hours earned of subgroups (i.e., Under 25 years of age) of student success seminar participants (n = 572) and nonparticipants (n = 243). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 12.3713; SD = 4.0598) and nonparticipants (M = 11.8219; SD = 3.6437); t(813) = 1.8208, p = 0.0690. These results suggest that participating in student success seminar does not have an influence on second-year credit hours earned based on being under 25 years of age.

An unpaired t-test was conducted to compare the second-year credit hours earned of subgroups (i.e., Female) of student success seminar participants (n = 386) and nonparticipants (n = 186). Results indicated that there was not a significant difference in credit hours earned

between student success seminar participants (M = 12.2641; SD = 3.7687) and nonparticipants (M = 11.6109; SD = 4.0193); t(570) = 1.8999, p = 0.0579. These results suggest that participating in student success seminar does not have an influence on second-year credit hours earned based on being female.

An unpaired t-test was conducted to compare the second-year credit hours earned of subgroups (i.e., Male) of student success seminar participants (n = 305) and nonparticipants (n = 116). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 12.101; SD = 4.0512) and nonparticipants (M = 12.0256; SD = 3.5482); t(419) = 0.1763, p = 0.8601. These results suggest that participating in student success seminar does not have an influence on second-year credit hours earned based on being Male.

An unpaired t-test was conducted to compare the second-year credit hours earned of subgroups (i.e., White) of student success seminar participants (n = 397) and nonparticipants (n = 159). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 12.0988; SD = 4.1338) and nonparticipants (M = 11.6164; SD = 3.7589); t(554) = 1.2753, p = 0.2027. These results suggest that participating in student success seminar does not have an influence on second-year credit hours earned based on being White.

An unpaired t-test was conducted to compare the second-year credit hours earned of subgroups (i.e., African-American) of student success seminar participants (n = 52) and nonparticipants (n = 18). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.9037; SD = 3.9588) and nonparticipants (M = 11.1639; SD = 4.8453); t(68) = 0.6444, p = 0.5215. These results suggest

that participating in student success seminar does not have an influence on second-year credit hours earned based on being African-American.

An unpaired t-test was conducted to compare the second-year credit hours earned of subgroups (i.e., Asian/Pacific Islander) of student success seminar participants (n = 67) and nonparticipants (n = 41). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 12.8528; SD = 4.2851) and nonparticipants (M = 12.2912; SD = 3.8385); t(106) = 0.6871, p = 0.4935. These results suggest that participating in student success seminar does not have an influence on second-year credit hours earned based on being Asian/Pacific Islander.

Because of the reduced number of Hispanic students remaining in the sample at the end of the second-year (participant n = 8 and nonparticipant n = 1), no analyses were conducted to examine whether or not participation in student success seminar impacted second-year credit hours earned for Hispanic students.

An unpaired t-test was conducted to compare the second-year credit hours earned of subgroups (i.e., Other ethnicity) of student success seminar participants (n = 101) and nonparticipants (n = 60). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 12.5977; SD = 3.5369) and nonparticipants (M = 12.0352; SD = 3.4529); t(159) = 0.9843, p = 0.3265. These results suggest that participating in student success seminar does not have an influence on second-year credit hours earned based on students identifying as Other ethnicity.

An unpaired t-test was conducted to compare the second-year credit hours earned of subgroups (i.e., 12 + Credit hours/Full-time) of student success seminar participants (n = 567) and nonparticipants (n = 181). Results indicated that there was not a significant difference in

credit hours earned between student success seminar participants (M = 12.542; SD = 3.8847) and nonparticipants (M = 12.6015; SD = 3.5999; t(746) = 0.1825, p = 0.8552. These results suggest that participating in student success seminar does not have an influence on second-year credit hours earned based on being enrolled in 12 or more credit hours.

An unpaired t-test was conducted to compare the second-year credit hours earned of subgroups (i.e., < 12 Credit hours/Part-time) of student success seminar participants (n = 136) and nonparticipants (n = 121). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 9.9843; SD = 4.1543) and nonparticipants (M = 10.5193; SD = 3.869); t(297) = 1.0643, p = 0.2882. These results suggest that participating in student success seminar does not have an influence on second-year credit hours earned based on being enrolled in less than 12 credit hours.

An unpaired t-test was conducted to compare the second-year credit hours earned of subgroups (i.e., High school graduate) of student success seminar participants (n = 659) and nonparticipants (n = 282). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 12.1278; SD = 4.0651) and nonparticipants (M = 11.6816; SD = 3.8752); t(939) = 1.5640, p = 0.1181. These results suggest that participating in student success seminar does not have an influence on second-year credit hours earned based on being a high school graduate.

An unpaired t-test was conducted to compare the second-year credit hours earned of subgroups (i.e., GED) of student success seminar participants (n = 35) and nonparticipants (n = 17). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 10.3969; SD = 3.9166) and nonparticipants (M = 12.3541; SD = 3.0831); t(50) = 1.8037, p = 0.0773. These results suggest that participating in

student success seminar does not have an influence on second-year credit hours earned based on earning a GED.

An unpaired t-test was conducted to compare the second-year credit hours earned of subgroups (i.e., No transfer intent) of student success seminar participants (n = 251) and nonparticipants (n = 108). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.0169; SD = 3.903) and nonparticipants (M = 10.8589; SD = 3.7003); t(357) = 0.3572, p = 0.7211. These results suggest that participating in student success seminar does not have an influence on second-year credit hours earned based on no intent to transfer.

An unpaired t-test was conducted to compare the second-year credit hours earned of subgroups (i.e., Intent to transfer) of student success seminar participants (n = 452) and nonparticipants (n = 194). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 12.6235; SD = 4.0382) and nonparticipants (M = 12.273; SD = 3.838); t(644) = 1.0262, p = 0.3052. These results suggest that participating in student success seminar does not have an influence on second-year credit hours earned based on intent to transfer.

Table 16

Mean Second-Year Credit Hours Earned by Participation and Subgroup Identification

Subgroup	Participant			Nonparticipant		
	n	M	SD	n	M	SD
Total	653	11.5431	4.4958	215	11.5624	4.3036
Age group						
Over 25	131	10.6437	3.7942	59	11.5425	3.6069
Under 25	572	12.3713	4.0598	243	11.8219	3.6437
Gender						
Female	386	12.2641	3.7687	186	11.6109	4.0193
Male	305	12.101	4.0512	116	12.0256	3.5482
Ethnicity						
White	397	12.0988	4.1338	159	11.6164	3.7589
Af. American	52	11.9037	3.9588	18	11.1639	4.8453
Asian/Pac. Islander	67	12.8528	4.2851	41	12.2912	3.8385
Hispanic	8	12.1263	3.7959	1	5.0	0
Other	101	12.5977	3.5369	60	12.0352	3.4529
Initial enrollment status						
Full-time (12 + hours)	567	12.542	3.8847	181	12.6015	3.5999
Part-time (< 12 hours)	136	9.9843	4.1543	121	10.5193	3.869
High school performance						
High school graduate	659	12.1278	4.0651	282	11.6816	3.8752
GED recipient	35	10.3969	3.9166	17	12.3541	3.0831
Degree intent						
Did not plan to transfer	251	11.016	3.903	108	10.8589	3.7003
Planned to transfer	452	12.6235	4.0382	194	12.273	3.838

An unpaired t-test was conducted to compare the third-year credit hours earned of subgroups (i.e., Over 25 years of age) of student success seminar participants (n = 81) and

nonparticipants (n = 34). As indicated in Table 17, results show there was not a significant difference in credit hours earned between student success seminar participants (M = 10.4416; SD = 4.4569) and nonparticipants (M = 10.8229; SD = 3.5151); t(113) = 0.4439, p = 0.6580 over 25 years of age. These results suggest that participating in student success seminar does not have an influence on third-year credit hours earned based on being over 25 years of age.

An unpaired t-test was conducted to compare the third-year credit hours earned of subgroups (i.e., Under 25 years of age) of student success seminar participants (n = 347) and nonparticipants (n = 171). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.4345; SD = 4.097) and nonparticipants (M = 11.0407; SD = 3.9534); t(516) = 1.0406, p = 0.2985. These results suggest that participating in student success seminar does not have an influence on third-year credit hours earned based on being under 25 years of age.

An unpaired t-test was conducted to compare the third-year credit hours earned of subgroups (i.e., Female) of student success seminar participants (n = 242) and nonparticipants (n = 133). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.3643; SD = 3.9575) and nonparticipants (M = 11.1144; SD = 3.9971); t(373) = 0.5829, p = 0.5603. These results suggest that participating in student success seminar does not have an influence on third-year credit hours earned based on being female.

An unpaired t-test was conducted to compare the third-year credit hours earned of subgroups (i.e., Male) of student success seminar participants (n = 175) and nonparticipants (n = 72). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.5087; SD = 4.252) and nonparticipants (M =

10.6251; SD = 3.6134); t(245) = 1.5478, p = 0.1230. These results suggest that participating in student success seminar does not have an influence on third-year credit hours earned based on being Male.

An unpaired t-test was conducted to compare the third-year grade credit hours earned of subgroups (i.e., White) of student success seminar participants (n = 229) and nonparticipants (n = 103). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.3663; SD = 4.1845) and nonparticipants (M = 10.4093; SD = 3.9463); t(330) = 1.9615, p = 0.0507. These results suggest that participating in student success seminar does not have an influence on third-year credit hours earned based on being White.

An unpaired t-test was conducted to compare the third-year credit hours earned of subgroups (i.e., African-American) of student success seminar participants (n = 33) and nonparticipants (n = 9). Results indicated that there was a significant difference in credit hours earned between student success seminar participants (M = 12.0303; SD = 3.7141) and nonparticipants (M = 9.22; SD = 3.2307); t(40) = 2.0629, p = 0.0457. These results suggest that participating in student success seminar does have an influence on third-year credit hours earned based on being African-American.

An unpaired t-test was conducted to compare the third-year credit hours earned of subgroups (i.e., Asian/Pacific Islander) of student success seminar participants (n = 47) and nonparticipants (n = 29). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.6587; SD = 4.2139) and nonparticipants (M = 9.7914; SD = 3.5374); t(74) = 1.9911, p = 0.0502. These results suggest

that participating in student success seminar does not have an influence on third-year credit hours earned based on being Asian/Pacific Islander.

Because of the reduced number of Hispanic students remaining in the sample at the end of the third-year (participant n = 5 and nonparticipant n = 0), no analyses were conducted to examine whether or not participation in student success seminar impacted third-year credit hours earned for Hispanic students.

An unpaired t-test was conducted to compare the third-year credit hours earned of subgroups (i.e., Other ethnicity) of student success seminar participants (n = 65) and nonparticipants (n = 47). Results indicated that there was a significant difference in credit hours earned between student success seminar participants (M = 11.1045; SD = 3.7326) and nonparticipants (M = 12.8911; SD = 3.4415); t(112) = 2.5969, p = 0.0107. These results suggest that participating in student success seminar does have an influence on third-year credit hours earned based on students identifying as Other ethnicity.

An unpaired t-test was conducted to compare the third-year credit hours earned of subgroups (i.e., 12 + Credit hours/Full-time) of student success seminar participants (n = 328) and nonparticipants (n = 123). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.5261; SD = 4.0737) and nonparticipants (M = 11.4378; SD = 3.74; t(449) = 0.2095, p = 0.8341. These results suggest that participating in student success seminar does not have an influence on third-year credit hours earned based on being enrolled in 12 or more credit hours.

An unpaired t-test was conducted to compare the third-year credit hours earned of subgroups (i.e., < 12 Credit hours/Part-time) of student success seminar participants (n = 100) and nonparticipants (n = 82). Results indicated that there was not a significant difference in

credit hours earned between student success seminar participants (M = 10.3328; SD = 4.4047) and nonparticipants (M = 10.3565; SD = 4.0103); t(180) = 0.0376, p = 0.9701. These results suggest that participating in student success seminar does not have an influence on third-year credit hours earned based on being enrolled in less than 12 credit hours.

An unpaired t-test was conducted to compare the third-year credit hours earned of subgroups (i.e., High school graduate) of student success seminar participants (n = 406) and nonparticipants (n = 194). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.2428; SD = 4.1884) and nonparticipants (M = 10.9905; SD = 3.8728); t(598) = 0.7069, p = 0.4799. These results suggest that participating in student success seminar does not have an influence on third-year credit hours earned based on being a high school graduate.

An unpaired t-test was conducted to compare the third-year credit hours earned of subgroups (i.e., GED) of student success seminar participants (n = 16) and nonparticipants (n = 8). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 12.0025; SD = 3.7395) and nonparticipants (M = 9.875; SD = 4.0127); t(22) = 1.2833, p = 0.2127. These results suggest that participating in student success seminar does not have an influence on third-year credit hours earned based on earning a GED.

An unpaired t-test was conducted to compare the third-year credit hours earned of subgroups (i.e., No transfer intent) of student success seminar participants (n = 161) and nonparticipants (n = 68). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 10.8883; SD = 4.2814) and nonparticipants (M = 11.3709; SD = 3.9559); t(227) = 0.7968, p = 0.4264. These results suggest

that participating in student success seminar does not have an influence on third-year credit hours earned based on no intent to transfer.

An unpaired t-test was conducted to compare the third-year credit hours earned of subgroups (i.e., Intent to transfer) of student success seminar participants (n = 267) and nonparticipants (n = 137). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 11.467; SD = 4.1111) and nonparticipants (M = 10.8265; SD = 3.8366); t(402) = 1.5159, p = 0.1303. These results suggest that participating in student success seminar does not have an influence on third-year credit hours earned based on intent to transfer.

Table 17

Mean Third-Year Credit Hours Earned by Participation and Subgroup Identification

Subgroup	Participant			Nonparticipant		
	n	M	SD	n	M	SD
Total	355	11.0786	4.1752	131	10.5709	4.1917
Age group						
Over 25	81	10.4416	4.4569	34	10.8229	3.5151
Under 25	347	11.4345	4.097	171	11.0407	3.9534
Gender						
Female	242	11.3643	3.9575	133	11.1144	3.9971
Male	175	11.5087	4.252	72	10.6251	3.6134
Ethnicity						
White	229	11.3663	4.1845	103	10.4093	3.9463
Af. American	33	12.0303	3.7141**	9	9.22	3.2307**
Asian/Pac. Islander	47	11.6587	4.2139	29	9.7914	3.5374
Hispanic	5	11.20	1.788	0	0.0	0.0
Other	67	11.1045	3.7326**	47	12.8911	3.4415**

Initial enrollment status						
Full-time (12 + hours)	328	11.5261	4.0737	123	11.4378	3.74
Part-time (< 12 hours)	100	10.3328	4.4047	82	10.3565	4.0103
High school performance						
High school graduate	406	11.2428	4.1884	194	10.9905	3.8728
GED recipient	16	12.0025	3.7395	8	9.875	4.0127
Degree intent						
Did not plan to transfer	161	10.8883	4.2814	68	11.3709	3.9559
Planned to transfer	267	11.467	4.1111	137	10.8265	3.8366

$p < .05$**

An unpaired t-test was conducted to compare the fourth-year grade credit hours earned of subgroups (i.e., Over 25 years of age) of student success seminar participants (n = 30) and nonparticipants (n = 18). As indicated in Table 18, results show there was not a significant difference in credit hours earned between student success seminar participants (M = 10.1673; SD = 4.3928) and nonparticipants (M = 10.7778; SD = 3.156); t(46) = 0.5144, p = 0.6094 over 25 years of age. These results suggest that participating in student success seminar does not have an influence on fourth-year credit hours earned based on being over 25 years of age.

An unpaired t-test was conducted to compare the fourth-year credit hours earned of subgroups (i.e., Under 25 years of age) of student success seminar participants (n = 155) and nonparticipants (n = 82). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 9.9306; SD = 3.9903) and nonparticipants (M = 10.5961; SD = 4.3259); t(235) = 1.1860, p = 0.2368. These results suggest that participating in student success seminar does not have an influence on fourth-year credit hours earned based on being under 25 years of age.

An unpaired t-test was conducted to compare the fourth-year credit hours earned of subgroups (i.e., Female) of student success seminar participants (n = 105) and nonparticipants (n = 69). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 10.5028; SD = 3.8772) and nonparticipants (M = 9.8694; SD = 3.634); t(172) = 1.0804, p = 0.2815. These results suggest that participating in student success seminar does not have an influence on fourth-year credit hours earned based on being female.

An unpaired t-test was conducted to compare the fourth-year credit hours earned of subgroups (i.e., Male) of student success seminar participants (n = 79) and nonparticipants (n = 31). Results indicated that there was a significant difference in credit hours earned between student success seminar participants (M = 9.2539; SD = 4.218) and nonparticipants (M = 12.3235; SD = 4.6718); t(108) = 3.3305, p = 0.0012. These results suggest that participating in student success seminar does have an influence on fourth-year credit hours earned based on being Male.

An unpaired t-test was conducted to compare the fourth-year credit hours earned of subgroups (i.e., White) of student success seminar participants (n = 105) and nonparticipants (n = 45). Results indicated that there was not a significant difference in credit hours earned average for student success seminar participants (M = 9.3519; SD = 4.1638) and nonparticipants (M = 10.3991; SD = 3.8547); t(148) = 1.4425, p = 0.1513. These results suggest that participating in student success seminar does not have an influence on fourth-year credit hours earned based on being White.

An unpaired t-test was conducted to compare the fourth-year credit hours earned of subgroups (i.e., African-American) of student success seminar participants (n = 15) and

nonparticipants (n = 2). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 12.2673; SD = 3.2384) and nonparticipants (M = 13.50; SD = 2.1213); t(15) = 0.5156, p = 0.6137. These results suggest that participating in student success seminar does not have an influence on fourth-year credit hours earned based on being African-American.

An unpaired t-test was conducted to compare the fourth-year credit hours earned of subgroups (i.e., Asian/Pacific Islander) of student success seminar participants (n = 20) and nonparticipants (n = 11). Results indicated that there was a significant difference in credit hours earned between student success seminar participants (M = 10.952; SD = 3.9029) and nonparticipants (M = 7.8182; SD = 3.7078); t(29) = 2.1759, p = 0.0379. These results suggest that participating in student success seminar does have an influence on fourth-year credit hours earned based on being Asian/Pacific Islander.

Because of the reduced number of Hispanic students remaining in the sample at the end of the fourth-year (participant n = 1 and nonparticipant n = 0), no analyses were conducted to examine whether or not participation in student success seminar impacted fourth-year credit hours earned for Hispanic students.

An unpaired t-test was conducted to compare the fourth-year grade credit hours earned of subgroups (i.e., Other ethnicity) of student success seminar participants (n = 28) and nonparticipants (n = 30). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 10.4286; SD = 3.6833) and nonparticipants (M = 11.3667; SD = 4.5213); t(56) = 0.8626, p = 0.3920. These results suggest that participating in student success seminar does not have an influence on fourth-year credit hours earned based on students identifying as Other ethnicity.

An unpaired t-test was conducted to compare the fourth-year credit hours earned of subgroups (i.e., 12 + Credit hours/Full-time) of student success seminar participants (n = 145) and nonparticipants (n = 53). Results indicated that there was not a significant difference in grade point average between student success seminar participants (M = 10.0983; SD = 4.0464) and nonparticipants (M = 10.8494; SD = 3.7393; t(196) = 1.1795, p = 0.2396. These results suggest that participating in student success seminar does not have an influence on fourth-year credit hours earned based on being enrolled in 12 or more credit hours.

An unpaired t-test was conducted to compare the fourth-year credit hours earned of subgroups (i.e., < 12 Credit hours/Part-time) of student success seminar participants (n = 40) and nonparticipants (n = 47). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 9.5003; SD = 4.0801) and nonparticipants (M = 10.3821; SD = 4.5483); t(85) = 0.9445, p = 0.3476. These results suggest that participating in student success seminar does not have an influence on fourth-year credit hours earned based on being enrolled in less than 12 credit hours.

An unpaired t-test was conducted to compare the fourth-year credit hours earned of subgroups (i.e., High school graduate) of student success seminar participants (n = 175) and nonparticipants (n = 92). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 9.9186; SD = 3.9915) and nonparticipants (M = 10.5023; SD = 4.1807); t(265) = 1.1171, p = 0.2650. These results suggest that participating in student success seminar does not have an influence on fourth-year credit hours earned based on being a high school graduate.

An unpaired t-test was conducted to compare the fourth-year credit hours earned of subgroups (i.e., GED) of student success seminar participants (n = 9) and nonparticipants (n = 8).

Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 10.3356; SD = 5.219) and nonparticipants (M = 12.125; SD = 3.2291); t(15) = 0.8362, p = 0.4161. These results suggest that participating in student success seminar does not have an influence on fourth-year credit hours earned based on earning a GED.

An unpaired t-test was conducted to compare the fourth-year credit hours earned of subgroups (i.e., No transfer intent) of student success seminar participants (n = 68) and nonparticipants (n = 42). Results indicated that there was not a significant difference in credit hours earned between student success seminar participants (M = 10.2215; SD = 4.1931) and nonparticipants (M = 9.9245; SD = 4.0095); t(108) = 0.3669, p = 0.7144. These results suggest that participating in student success seminar does not have an influence on fourth-year credit hours earned based on no intent to transfer.

An unpaired t-test was conducted to compare the fourth-year grade credit hours earned of subgroups (i.e., Intent to transfer) of student success seminar participants (n = 117) and nonparticipants (n = 58). Results indicated that there was a significant difference in credit hours earned between student success seminar participants (M = 9.8225; SD = 3.9734) and nonparticipants (M = 11.1381; SD = 4.1491); t(173) = 2.0318, p = 0.0437. These results suggest that participating in student success seminar does have an influence on fourth-year credit hours earned based on intent to transfer.

Table 18

Mean Fourth-Year Credit Hours Earned by Participation and Subgroup Identification

Subgroup	Participant			Nonparticipant		
	n	M	SD	n	M	SD
Total	167	10.0832	3.9669	63	9.4913	3.8753
Age group						
Over 25	30	10.1673	4.3928	18	10.7778	3.156
Under 25	155	9.9306	3.9903	82	10.5961	4.3259
Gender						
Female	105	10.5028	3.8772	69	9.8694	3.634
Male	79	9.2539	4.218*	31	12.3235	4.6718*
Ethnicity						
White	105	9.3519	4.1638	45	10.3991	3.8547
Af. American	15	12.2673	3.2384	2	13.50	2.1213
Asian/Pac. Islander	20	10.952	3.9029**	11	7.8182	3.7078**
Hispanic	1	15.00	0.0	0	0.0	0.0
Other	28	10.4286	3.6833	30	11.3667	4.5213
Initial enrollment status						
Full-time (12 + hours)	145	10.0983	4.0464	53	10.8494	3.7393
Part-time (< 12 hours)	40	9.5003	4.0801	47	10.3821	4.5483
High school performance						
High school graduate	175	9.9186	3.9915	92	10.5023	4.1807
GED recipient	9	10.3356	5.219	8	12.125	3.2291
Degree intent						
Did not plan to transfer	68	10.2215	4.1931	42	9.9245	4.0095
Planned to transfer	117	9.8225	3.9734**	58	11.1381	4.1491**

$p < .05$**
$P < .01$*

Findings related to persistence

Research question three investigated the relationship between participation in a community college student success course and persistence. Chi-square analyses were conducted to test short and long-term persistence. In each chi-square analysis, a 2 x 2 contingency table was utilized. Due to the similarities of the 2007, 2008, and 2009 populations of participants and nonparticipants, the three cohorts were combined providing for a larger size n.

Research Question III. How did participation in a community college student success seminar influence student persistence compared to nonparticipants?

(a) There was no significant difference between student success seminar participants and nonparticipants in persistence to the second term;

(b) There was no significant difference between student success seminar participants and nonparticipants in persistence to the third term;

(c) There was no significant difference between student success seminar participants and nonparticipants in persistence to the second year;

(d) There was no significant difference between student success seminar participants and nonparticipants in persistence to the third year;

(e) There was no significant difference between student success seminar participants and nonparticipants in persistence to the fourth year.

As indicated in Table 19, students that participated ($n = 1520$) in student success seminar persist at higher rates than nonparticipants ($n = 652$). For research questions IIIa, IIIb, IIIc, and IIId chi-square analyses revealed a statistically significant relationship ($p < .01$) between participating in a student success seminar and persisting to the 3rd year of college. However, research questions IIIe regarding persistence to the fourth-year was not statistically significant.

Hypothesis IIIa. Chi-square analyses were conducted to compare persistence to the second-term between student success seminar participants (n = 1159) and nonparticipants (n = 369). Results indicated that there was a significant difference in persistence to the second-term χ^2 (1, N = 1528) = 83.56, $p < .01$ for student success seminar participants. These results suggest that participating in student success seminar influences persistence to the second-term.

Hypothesis IIIb. Chi-square analyses were conducted to compare persistence to the third-term between student success seminar participants (n = 1037) and nonparticipants (n = 322). Results indicated that there was a significant difference in persistence to the third-term χ^2 (1, N = 1359) = 68.33, $p < .01$ for student success seminar participants. These results suggest that participating in student success seminar influences persistence to the third-term.

Hypothesis IIIc. Chi-square analyses were conducted to compare persistence to the second-year between student success seminar participants (n = 773) and nonparticipants (n = 253). Results indicated that there was a significant difference in persistence to the second-year χ^2 (1, N = 1026) = 26.10, $p < .01$ for student success seminar participants. These results suggest that participating in student success seminar influences persistence to the second-year.

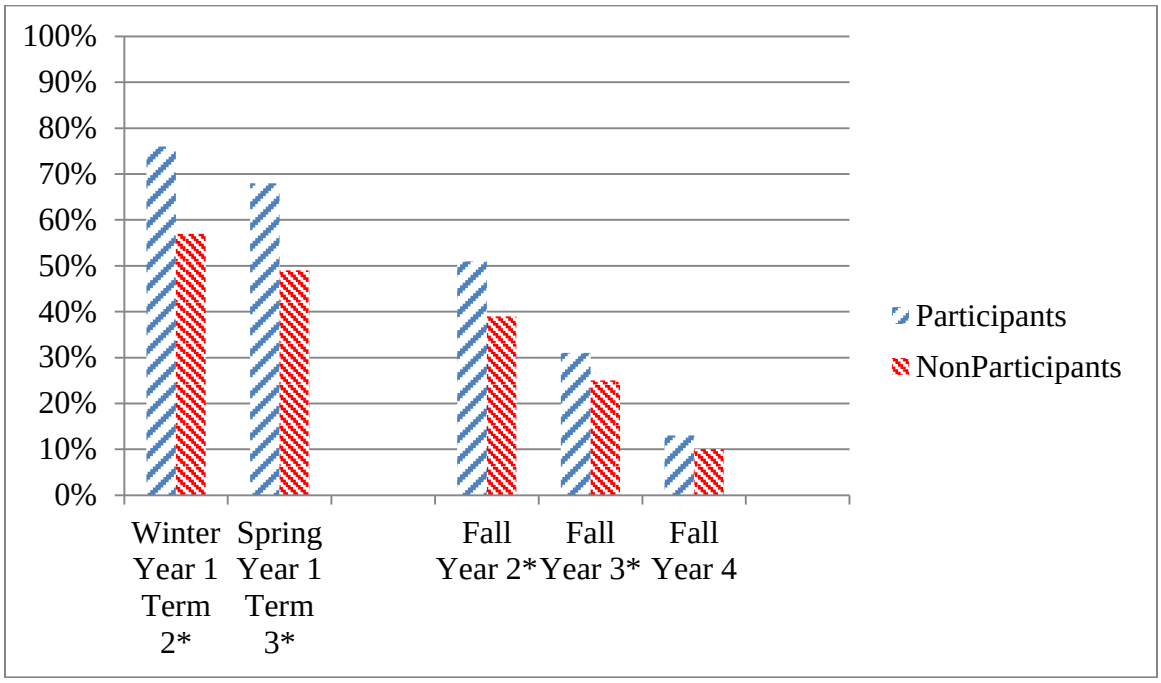
Hypothesis IIId. Chi-square analyses were conducted to compare persistence to the third-year between student success seminar participants (n = 470) and nonparticipants (n = 157). Results indicated that there was a significant difference in persistence to the third-year χ^2 (1, N = 627) = 10.06, $p < .01$ for student success seminar participants. These results suggest that participating in student success seminar influences persistence to the third-year.

Hypothesis IIIe. Chi-square analyses were conducted to compare persistence to the fourth-year between student success seminar participants (n = 204) and nonparticipants (n = 79). Results indicated that there was not a significant difference in persistence to the fourth-year χ^2

(1, N = 283) = .57, $p < .4483$ for student success seminar participants. These results suggest that participating in student success seminar has no influence on persistence to the fourth-year.

Table 19

Short and Long-Term Persistence by Student Success Seminar Participation



p < .01*

Subgroups. Additional chi-square analyses were conducted to explore whether or not participation in a student success seminar impacted the persistence of subgroups of students differently. Subgroups were defined according to age, gender, ethnicity, high school performance, initial enrollment status, and degree intent. Due to the similarities of the 2007, 2008, and 2009 populations of participants and nonparticipants, the three cohorts were combined providing for a larger n (participants n = 1520; nonparticipants n = 652).

Chi-square analyses were conducted to compare persistence to the second-term for subgroups (i.e., Over 25 years of age) of student success seminar participants (n = 196) and

nonparticipants (n = 62). As indicated in Table 20, results show that there was a significant difference in persistence to the second-term χ^2 (1, N = 268) = 8.12, $p < .0044$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on persistence to the second-term based on being over 25 years of age.

Chi-square analyses were conducted to compare persistence to the second-term for subgroups (i.e., Under 25 years of age) of student success seminar participants (n = 963) and nonparticipants (n = 307). Results show that there was a significant difference in persistence to the second-term χ^2 (1, N = 1270) = 75.84, $p < .0001$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on persistence to the second-term based on being under 25 years of age.

Chi-square analyses were conducted to compare persistence to the second-term for subgroups (i.e., Female) of student success seminar participants (n = 627) and nonparticipants (n = 206). Results indicated that there was a significant difference in persistence to the second-term χ^2 (1, N = 833) = 60.69, $p < .0001$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on second-term persistence based on being female.

Chi-square analyses were conducted to compare persistence to the second-term for subgroups (i.e., Male) of student success seminar participants (n = 518) and nonparticipants (n = 163). Results indicated that there was a significant difference in persistence to the second-term χ^2 (1, N = 681) = 28.80, $p < .0001$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on second-term persistence based on being male.

Chi-square analyses were conducted to compare persistence to the second-term for subgroups (i.e., White) of student success seminar participants (n = 650) and nonparticipants (n = 196). Results indicated that there was a significant difference in persistence to the second-term χ^2 (1, N = 846) = 46.77, $p < .0001$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on second-term persistence based on being White.

Chi-square analyses were conducted to compare persistence to the second-term for subgroups (i.e., African-American) of student success seminar participants (n = 108) and nonparticipants (n = 29). Results indicated that there was not a significant difference in persistence to the second-term χ^2 (1, N = 137) = 1.66, $p < .1963$ for student success seminar participants. These results suggest that participating in student success seminar has no influence on second-term persistence based on being African-America.

Chi-square analyses were conducted to compare persistence to the second-term for subgroups (i.e., Asian/Pacific Islander) of student success seminar participants (n = 94) and nonparticipants (n = 40). Results indicated that there was a significant difference in persistence to the second-term χ^2 (1, N = 134) = 14.56, $p < .0001$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on second-term persistence based on being Asian/Pacific Islander.

Chi-square analyses were conducted to compare persistence to the second-term for subgroups (i.e., Hispanic) of student success seminar participants (n = 15) and nonparticipants (n = 4). Results indicated that there was not a significant difference in persistence to the second-term χ^2 (1, N = 19) = .05, $p < .8153$ for student success seminar participants. These results

suggest that participating in student success seminar does not influence second-term persistence based on being Hispanic.

Chi-square analyses were conducted to compare persistence to the second-term for subgroups (i.e., Other ethnicity) of student success seminar participants (n = 186) and nonparticipants (n = 67). Results indicated that there was a significant difference in persistence to the second-term χ^2 (1, N = 253) = 20.82, $p < .0001$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on second-term persistence based on students identifying as Other ethnicity.

Chi-square analyses were conducted to compare persistence to the second-term for subgroups (i.e., 12 + Credit hours/Full-time) of student success seminar participants (n = 917) and nonparticipants (n = 188). Results indicated that there was a significant difference in persistence to the second-term χ^2 (1, N = 1105) = 85.14, $p < .0001$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on second-term persistence based on students enrolled in 12 or more credits.

Chi-square analyses were conducted to compare persistence to the second-term for subgroups (i.e., < 12 Credits/Part-time) of student success seminar participants (n = 242) and nonparticipants (n = 181). Results indicated that there was no significant difference in persistence to the second-term χ^2 (1, N = 423) = 1.12, $p < .2884$ for student success seminar participants. These results suggest that participating in student success seminar does not influence second-term persistence based on being enrolled in less than 12 credits.

Chi-square analyses were conducted to compare persistence to the second-term for subgroups (i.e., High school graduate) of student success seminar participants (n = 1072) and nonparticipants (n = 349). Results indicated that there was a significant difference in persistence

to the second-term χ^2 (1, N = 1423) = 86.92, p < .0001for student success seminar participants. These results suggest that participating in student success seminar has an influence on second-term persistence based on being a high school graduate.

Chi-square analyses were conducted to compare persistence to the second-term for subgroups (i.e., GED) of student success seminar participants (n = 68) and nonparticipants (n = 15). Results indicated that there was not a significant difference in persistence to the second-term χ^2 (1, N = 83) = .94, p < .3312 for student success seminar participants. These results suggest that participating in student success seminar does not have an influence on second-term persistence based on earning a GED.

Chi-square analyses were conducted to compare persistence to the second-term for subgroups (i.e., No transfer intent) of student success seminar participants (n = 418) and nonparticipants (n = 140). Results indicated that there was a significant difference in persistence to the second-term χ^2 (1, N = 558) = 31.30, p < .0001 for student success seminar participants. These results suggest that participating in student success seminar has an influence on second-term persistence based on no intent to transfer.

Chi-square analyses were conducted to compare persistence to the second-term for subgroups (i.e., Intent to transfer) of student success seminar participants (n = 741) and nonparticipants (n = 229). Results indicated that there was a significant difference in persistence to the second-term χ^2 (1, N = 970) = 49.78, p < .0001 for student success seminar participants. These results suggest that participating in student success seminar has an influence on second-term persistence based on intent to transfer.

Table 20

Persistence To The Second-Term by Participation and Subgroup Identification

Subgroup	Participants n	Participants % Persisted	Nonparticipants n	Nonparticipants % Persisted
Total	1159/1520	76%	369/652	57%
Age group				
Over 25	196	73%*	62	57%*
Under 25	963	77%*	307	56%*
Gender				
Female	627	78%*	206	56%*
Male	532	77%*	163	58%*
Ethnicity				
White	650	77%*	196	57%*
Af. American	108	69%	29	58%
Asian/Pac. Islander	94	84%*	40	57%*
Hispanic	15	71%	4	57%
Other	186	79%*	67	55%*
Initial enrollment status				
Full-time (12 + hours)	917	82%*	188	57%*
Part-time (< 12 hours)	242	60%	181	56%
High school performance				
High school graduate	1072	78%*	349	57%*
GED recipient	68	60%	15	48%
Degree intent				
Did not plan to transfer	418	71%*	140	51%*
Planned to transfer	741	80%*	229	61%*

P < .01*

Chi-square analyses were conducted to compare persistence to the third-term for subgroups (i.e., Over 25 years of age) of student success seminar participants (n = 172) and

nonparticipants (n = 61). As indicated in Table 21, results show that there was not a significant difference in persistence to the third-term χ^2 (1, N = 233) = 1.62, $p < .2027$ for student success seminar participants. These results suggest that participating in student success seminar does not have an influence on persistence to the third-term based on being over 25 years of age.

Chi-square analyses were conducted to compare persistence to the third-term for subgroups (i.e., Under 25 years of age) of student success seminar participants (n = 865) and nonparticipants (n = 261). Results show that there was a significant difference in persistence to the third-term χ^2 (1, N = 1126) = 71.36, $p < .0001$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on persistence to the third-term based on being under 25 years of age.

Chi-square analyses were conducted to compare persistence to the third-term for subgroups (i.e., Female) of student success seminar participants (n = 573) and nonparticipants (n = 182). Results indicated that there was a significant difference in persistence to the third-term χ^2 (1, N = 755) = 53.30, $p < .0001$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on third-term persistence based on being female.

Chi-square analyses were conducted to compare persistence to the third-term for subgroups (i.e., Male) of student success seminar participants (n = 460) and nonparticipants (n = 140). Results indicated that there was a significant difference in persistence to the third-term χ^2 (1, N = 600) = 24.68, $p < .0001$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on third-term persistence based on being male.

Chi-square analyses were conducted to compare persistence to the third-term for subgroups (i.e., White) of student success seminar participants (n = 577) and nonparticipants (n = 170). Results indicated that there was a significant difference in persistence to the third-term χ^2 (1, N = 747) = 36.74, $p < .0001$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on third-term persistence based on being White.

Chi-square analyses were conducted to compare persistence to the third-term for subgroups (i.e., African-American) of student success seminar participants (n = 97) and nonparticipants (n = 25). Results indicated that there was not a significant difference in persistence to the third-term χ^2 (1, N = 122) = 1.84, $p < .1739$ for student success seminar participants. These results suggest that participating in student success seminar has no influence on third-term persistence based on being African-America.

Chi-square analyses were conducted to compare persistence to the third-term for subgroups (i.e., Asian/Pacific Islander) of student success seminar participants (n = 92) and nonparticipants (n = 39). Results indicated that there was a significant difference in persistence to the third-term χ^2 (1, N = 131) = 13.63, $p < .0002$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on third-term persistence based on being Asian/Pacific Islander.

Chi-square analyses were conducted to compare persistence to the third-term for subgroups (i.e., Hispanic) of student success seminar participants (n = 11) and nonparticipants (n = 1). Results indicated that there was no significant difference in persistence to the third-term χ^2 (1, N = 12) = 1.75, $p < .1859$ for student success seminar participants. These results suggest that

participating in student success seminar does not influence third-term persistence based on being Hispanic.

Chi-square analyses were conducted to compare persistence to the third-term for subgroups (i.e., Other ethnicity) of student success seminar participants (n = 168) and nonparticipants (n = 60). Results indicated that there was a significant difference in persistence to the third-term χ^2 (1, N = 228) = 15.70, $p < .0001$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on third-term persistence based on students identifying as Other ethnicity.

Chi-square analyses were conducted to compare persistence to the third-term for subgroups (i.e., 12 + Credit hours/Full-time) of student success seminar participants (n = 829) and nonparticipants (n = 167). Results indicated that there was a significant difference in persistence to the third-term χ^2 (1, N = 996) = 63.19, $p < .0001$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on third-term persistence based on students enrolled in 12 or more credits.

Chi-square analyses were conducted to compare persistence to the third-term for subgroups (i.e., < 12 Credits/Part-time) of student success seminar participants (n = 208) and nonparticipants (n = 155). Results indicated that there was no significant difference in persistence to the third-term χ^2 (1, N = 363) = .87, $p < .3489$ for student success seminar participants. These results suggest that participating in student success seminar does not influence third-term persistence based on being enrolled in less than 12 credits.

Chi-square analyses were conducted to compare persistence to the third-term for subgroups (i.e., High school graduate) of student success seminar participants (n = 960) and nonparticipants (n = 304). Results indicated that there was a significant difference in persistence

to the third-term χ^2 (1, N = 1264) = 71.11, $p < .0001$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on third-term persistence based on being a high school graduate.

Chi-square analyses were conducted to compare persistence to the third-term for subgroups (i.e., GED) of student success seminar participants (n = 59) and nonparticipants (n = 14). Results indicated that there was not a significant difference in persistence to the third-term χ^2 (1, N = 73) = .24, $p < .6221$ for student success seminar participants. These results suggest that participating in student success seminar does not have an influence on third-term persistence based on earning a GED.

Chi-square analyses were conducted to compare persistence to the third-term for subgroups (i.e., No transfer intent) of student success seminar participants (n = 371) and nonparticipants (n = 120). Results indicated that there was a significant difference in persistence to the third-term χ^2 (1, N = 491) = 27.22, $p < .0001$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on third-term persistence based on no intent to transfer.

Chi-square analyses were conducted to compare persistence to the third-term for subgroups (i.e., Intent to transfer) of student success seminar participants (n = 666) and nonparticipants (n = 202). Results indicated that there was a significant difference in persistence to the third-term χ^2 (1, N = 868) = 38.64, $p < .0001$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on third-term persistence based on intent to transfer.

Table 21

Persistence To The Third-Term by Participation and Subgroup Identification

Subgroup	Participants n	Participants % Persisted	Nonparticipants n	Nonparticipants % Persisted
Total	1037/1520	68%	339/652	52%
Age group				
Over 25	172	64%	61	56%
Under 25	865	69%*	261	48%*
Gender				
Female	573	71%*	182	49%*
Male	460	67%*	140	50%*
Ethnicity				
White	577	68%*	183	53%*
Af. American	97	62%	25	50%
Asian/Pac. Islander	92	82%*	39	56%*
Hispanic	11	52%	1	14%
Other	168	71%*	60	50%*
Initial enrollment status				
Full-time (12 + hours)	829	74%*	167	51%*
Part-time (< 12 hours)	208	52%	155	48%
High school performance				
High school graduate	960	70%*	304	50%*
GED recipient	59	52%	14	45%
Degree intent				
Did not plan to transfer	371	66%*	120	44%*
Planned to transfer	666	72%*	202	54%*

P < .01*

Chi-square analyses were conducted to compare persistence to the second-year for subgroups (i.e., Over 25 years of age) of student success seminar participants (n = 139) and

nonparticipants (n = 47). As indicated in Table 22, results show that there was not a significant difference in persistence to the second-year χ^2 (1, N = 186) = 1.82, $p < .1768$ for student success seminar participants. These results suggest that participating in student success seminar does not have an influence on persistence to the second-year based on being over 25 years of age.

Chi-square analyses were conducted to compare persistence to the second-year for subgroups (i.e., Under 25 years of age) of student success seminar participants (n = 634) and nonparticipants (n = 206). Results show that there was a significant difference in persistence to the second-year χ^2 (1, N = 840) = 24.33, $p < .0001$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on persistence to the second-year based on being under 25 years of age.

Chi-square analyses were conducted to compare persistence to the second-year for subgroups (i.e., Female) of student success seminar participants (n = 420) and nonparticipants (n = 143). Results indicated that there was a significant difference in persistence to the second-year χ^2 (1, N = 563) = 18.37, $p < .0001$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on second-year persistence based on being female.

Chi-square analyses were conducted to compare persistence to the second-year for subgroups (i.e., Male) of student success seminar participants (n = 341) and nonparticipants (n = 110). Results indicated that there was a significant difference in persistence to the second-year χ^2 (1, N = 451) = 8.65, $p < .0033$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on second-year persistence based on being male.

Chi-square analyses were conducted to compare persistence to the second-year for subgroups (i.e., White) of student success seminar participants (n = 436) and nonparticipants (n = 136). Results indicated that there was a significant difference in persistence to the second-year χ^2 (1, N = 572) = 13.93, $p < .0002$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on second-year persistence based on being White.

Chi-square analyses were conducted to compare persistence to the second-year for subgroups (i.e., African-American) of student success seminar participants (n = 62) and nonparticipants (n = 16). Results indicated that there was not a significant difference in persistence to the second-year χ^2 (1, N = 78) = .66, $p < .4152$ for student success seminar participants. These results suggest that participating in student success seminar has no influence on second-year persistence based on being African-America.

Chi-square analyses were conducted to compare persistence to the second-year for subgroups (i.e., Asian/Pacific Islander) of student success seminar participants (n = 71) and nonparticipants (n = 30). Results indicated that there was a significant difference in persistence to the second-year χ^2 (1, N = 101) = 6.54, $p < .0105$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on second-year persistence based on being Asian/Pacific Islander.

Chi-square analyses were conducted to compare persistence to the second-year for subgroups (i.e., Hispanic) of student success seminar participants (n = 8) and nonparticipants (n = 1). Results indicated that there was no significant difference in persistence to the second-year χ^2 (1, N = 9) = .49, $p < .4834$ for student success seminar participants. These results suggest that

participating in student success seminar does not influence second-year persistence based on being Hispanic.

Chi-square analyses were conducted to compare persistence to the second-year for subgroups (i.e., Other ethnicity) of student success seminar participants (n = 123) and nonparticipants (n = 49). Results indicated that there was a significant difference in persistence to the second-year χ^2 (1, N = 172) = 4.02, $p < .0448$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on second-year persistence based on students identifying as Other ethnicity.

Chi-square analyses were conducted to compare persistence to the second-year for subgroups (i.e., 12 + Credit hours/Full-time) of student success seminar participants (n = 612) and nonparticipants (n = 128). Results indicated that there was a significant difference in persistence to the second-year χ^2 (1, N = 740) = 24.59, $p < .0001$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on second-year persistence based on students enrolled in 12 or more credits.

Chi-square analyses were conducted to compare persistence to the second-year for subgroups (i.e., < 12 Credits/Part-time) of student success seminar participants (n = 161) and nonparticipants (n = 125). Results indicated that there was no significant difference in persistence to the second-year χ^2 (1, N = 286) = .09, $p < .7646$ for student success seminar participants. These results suggest that participating in student success seminar does not influence second-year persistence based on being enrolled in less than 12 credits.

Chi-square analyses were conducted to compare persistence to the second-year for subgroups (i.e., High school graduate) of student success seminar participants (n = 724) and nonparticipants (n = 237). Results indicated that there was a significant difference in persistence

to the second-year χ^2 (1, N = 961) = 31.33, $p < .0001$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on second-year persistence based on being a high school graduate.

Chi-square analyses were conducted to compare persistence to the second-year for subgroups (i.e., GED) of student success seminar participants (n = 38) and nonparticipants (n = 13). Results indicated that there was not a significant difference in persistence to the second-year χ^2 (1, N = 51) = .41, $p < .5191$ for student success seminar participants. These results suggest that participating in student success seminar does not have an influence on second-year persistence based on earning a GED.

Chi-square analyses were conducted to compare persistence to the second-year for subgroups (i.e., No transfer intent) of student success seminar participants (n = 282) and nonparticipants (n = 95). Results indicated that there was a significant difference in persistence to the second-year χ^2 (1, N = 377) = 12.71, $p < .0004$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on second-year persistence based on no intent to transfer.

Chi-square analyses were conducted to compare persistence to the second-year for subgroups (i.e., Intent to transfer) of student success seminar participants (n = 491) and nonparticipants (n = 158). Results indicated that there was a significant difference in persistence to the second-year χ^2 (1, N = 649) = 12.41, $p < .0004$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on third-term persistence based on intent to transfer.

Table 22

Persistence To The Second-Year by Participation and Subgroup Identification

Subgroup	Participants % Persisted		Nonparticipants % Persisted	
	n		n	
Total	733/1520	51%	253/652	39%
Age group				
Over 25	139	52%	47	44%
Under 25	634	51%*	206	38%*
Gender				
Female	420	52%*	143	39%*
Male	341	50%*	110	39%*
Ethnicity				
White	436	52%*	136	39%*
Af. American	62	40%	16	32%
Asian/Pac. Islander	71	63%**	30	43%**
Hispanic	9	43%	1	14%
Other	123	52%**	49	40%**
Initial enrollment status				
Full-time (12 + hours)	612	55%*	128	39%
Part-time (< 12 hours)	161	40%	125	39%
High school performance				
High school graduate	724	48%**	237	39%**
GED recipient	38	53%	13	42%
Degree intent				
Did not plan to transfer	282	36%*	95	35%*
Planned to transfer	491	64%*	158	42%*

P < .05**
P < .01*

Chi-square analyses were conducted to compare persistence to the third-year for subgroups (i.e., Over 25 years of age) of student success seminar participants (n = 88) and

nonparticipants (n = 27). As indicated in Table 23, results show that there was not a significant difference in persistence to the third-year χ^2 (1, N = 115) = 1.87, $p < .1712$ for student success seminar participants. These results suggest that participating in student success seminar does not influence persistence to the third-year based on being over 25 years of age.

Chi-square analyses were conducted to compare persistence to the third-year for subgroups (i.e., Under 25 years of age) of student success seminar participants (n = 382) and nonparticipants (n = 130). Results show that there was a significant difference in persistence to the third-year χ^2 (1, N = 512) = 7.81, $p < .0052$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on persistence to the third-year based on being under 25 years of age.

Chi-square analyses were conducted to compare persistence to the third-year for subgroups (i.e., Female) of student success seminar participants (n = 263) and nonparticipants (n = 95). Results indicated that there was a significant difference in persistence to the third-year χ^2 (1, N = 358) = 5.65, $p < .0174$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on third-year persistence based on being female.

Chi-square analyses were conducted to compare persistence to the third-year for subgroups (i.e., Male) of student success seminar participants (n = 195) and nonparticipants (n = 62). Results indicated that there was a significant difference in persistence to the third-year χ^2 (1, N = 257) = 3.87, $p < .0489$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on third-year persistence based on being male.

Chi-square analyses were conducted to compare persistence to the third-year for subgroups (i.e., White) of student success seminar participants (n = 252) and nonparticipants (n = 79). Results indicated that there was a significant difference in persistence to the third-year χ^2 (1, N = 331) = 5.45, $p < .0195$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on third-year persistence based on being White.

Chi-square analyses were conducted to compare persistence to the third-year for subgroups (i.e., African-American) of student success seminar participants (n = 37) and nonparticipants (n = 10). Results indicated that there was not a significant difference in persistence to the third-year χ^2 (1, N = 47) = .12, $p < .7252$ for student success seminar participants. These results suggest that participating in student success seminar does not influence third-year persistence based on being African-America.

Chi-square analyses were conducted to compare persistence to the third-year for subgroups (i.e., Asian/Pacific Islander) of student success seminar participants (n = 50) and nonparticipants (n = 21). Results indicated that there was not a significant difference in persistence to the third-year χ^2 (1, N = 71) = 3.29, $p < .0697$ for student success seminar participants. These results suggest that participating in student success seminar does not influence third-year persistence based on being Asian/Pacific Islander.

Chi-square analyses were conducted to compare persistence to the third-year for subgroups (i.e., Hispanic) of student success seminar participants (n = 6) and nonparticipants (n = 0). Results indicated that there was not a significant difference in persistence to the third-year χ^2 (1, N = 6) = 1.13, $p < .2875$ for student success seminar participants. These results suggest

that participating in student success seminar does not influence third-year persistence based on being Hispanic.

Chi-square analyses were conducted to compare persistence to the third-year for subgroups (i.e., Other ethnicity) of student success seminar participants (n = 75) and nonparticipants (n = 34). Results indicated that there was not a significant difference in persistence to the third-year χ^2 (1, N = 109) = .38, $p < .5362$ for student success seminar participants. These results suggest that participating in student success seminar does not influence third-year persistence based on students identifying as Other ethnicity.

Chi-square analyses were conducted to compare persistence to the third-year for subgroups (i.e., 12 + Credit hours/Full-time) of student success seminar participants (n = 356) and nonparticipants (n = 83). Results indicated that there was a significant difference in persistence to the third-year χ^2 (1, N = 439) = 4.86, $p < .0274$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on third-year persistence based on students enrolled in 12 or more credits.

Chi-square analyses were conducted to compare persistence to the third-year for subgroups (i.e., < 12 Credits/Part-time) of student success seminar participants (n = 114) and nonparticipants (n = 74). Results indicated that there was not a significant difference in persistence to the third-year χ^2 (1, N = 188) = 2.504, $p < .1136$ for student success seminar participants. These results suggest that participating in student success seminar does not influence third-year persistence based on being enrolled in less than 12 credits.

Chi-square analyses were conducted to compare persistence to the third-year for subgroups (i.e., High school graduate) of student success seminar participants (n = 443) and nonparticipants (n = 148). Results indicated that there was a significant difference in persistence

to the third-year χ^2 (1, N = 591) = 12.29, $p < .0005$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on third-year persistence based on being a high school graduate.

Chi-square analyses were conducted to compare persistence to the third-year for subgroups (i.e., GED) of student success seminar participants (n = 21) and nonparticipants (n = 7). Results indicated that there was not a significant difference in persistence to the third-year χ^2 (1, N = 28) = .05, $p < .8088$ for student success seminar participants. These results suggest that participating in student success seminar does not influence third-year persistence based on earning a GED.

Chi-square analyses were conducted to compare persistence to the third-year for subgroups (i.e., No transfer intent) of student success seminar participants (n = 177) and nonparticipants (n = 54). Results indicated that there was a significant difference in persistence to the third-year χ^2 (1, N = 231) = 9.68, $p < .0019$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on third-year persistence based on no intent to transfer.

Chi-square analyses were conducted to compare persistence to the third-year for subgroups (i.e., Intent to transfer) of student success seminar participants (n = 293) and nonparticipants (n = 103). Results indicated that there was not a significant difference in persistence to the third-year χ^2 (1, N = 396) = 2.06, $p < .1509$ for student success seminar participants. These results suggest that participating in student success seminar does not influence third-term persistence based on intent to transfer.

Table 23

Persistence To The Third-Year by Participation and Subgroup Identification

Subgroup	Participants n	Participants % Persisted	Nonparticipants n	Nonparticipants % Persisted
Total	470/1520	31%	157/652	24%
Age group				
Over 25	88	33%	24	22%
Under 25	382	31%*	130	24%*
Gender				
Female	263	33%**	95	26%**
Male	195	28%**	62	22%**
Ethnicity				
White	252	30%**	79	23%**
Af. American	37	24%	10	17%
Asian/Pac. Islander	50	45%	21	30%
Hispanic	6	29%	0	0%
Other	75	32%	34	28%
Initial enrollment status				
Full-time (12 + hours)	356	32%**	83	25%**
Part-time (< 12 hours)	114	28%	74	23%
High school performance				
High school graduate	443	32%*	148	24%*
GED recipient	21	19%	7	23%
Degree intent				
Did not plan to transfer	177	20%*	54	20%*
Planned to transfer	293	32%	103	27%

P < .05**
P < .01*

Chi-square analyses were conducted to compare persistence to the fourth-year for subgroups (i.e., Over 25 years of age) of student success seminar participants (n = 33) and

nonparticipants (n = 14). As indicated in Table 24, results show that there was not a significant difference in persistence to the fourth-year χ^2 (1, N = 47) = .03, p < .8632 for student success seminar participants. These results suggest that participating in student success seminar does not influence persistence to the fourth-year based on being over 25 years of age.

Chi-square analyses were conducted to compare persistence to the fourth-year for subgroups (i.e., Under 25 years of age) of student success seminar participants (n = 171) and nonparticipants (n = 65). Results show that there was not a significant difference in persistence to the fourth-year χ^2 (1, N = 236) = .82, p < .3631 for student success seminar participants. These results suggest that participating in student success seminar does not influence persistence to the fourth-year based on being under 25 years of age.

Chi-square analyses were conducted to compare persistence to the fourth-year for subgroups (i.e., Female) of student success seminar participants (n = 111) and nonparticipants (n = 51). Results indicated that there was not a significant difference in persistence to the fourth-year χ^2 (1, N = 162) = 0.00, p < .9855 for student success seminar participants. These results suggest that participating in student success seminar does not influence fourth-year persistence based on being female.

Chi-square analyses were conducted to compare persistence to the fourth-year for subgroups (i.e., Male) of student success seminar participants (n = 92) and nonparticipants (n = 28). Results indicated that there was not a significant difference in persistence to the fourth-year χ^2 (1, N = 120) = 1.90, p < .1679 for student success seminar participants. These results suggest that participating in student success seminar does not influence fourth-year persistence based on being male.

Chi-square analyses were conducted to compare persistence to the fourth-year for subgroups (i.e., White) of student success seminar participants (n = 114) and nonparticipants (n = 40). Results indicated that there was not a significant difference in persistence to the fourth-year χ^2 (1, N = 154) = .61, p < .4340 for student success seminar participants. These results suggest that participating in student success seminar does not influence fourth-year persistence based on being White.

Chi-square analyses were conducted to compare persistence to the fourth-year for subgroups (i.e., African-American) of student success seminar participants (n = 18) and nonparticipants (n = 3). Results indicated that there was not a significant difference in persistence to the fourth-year χ^2 (1, N = 21) = .73, p < .3910 for student success seminar participants. These results suggest that participating in student success seminar does not influence fourth-year persistence based on being African-America.

Chi-square analyses were conducted to compare persistence to the fourth-year for subgroups (i.e., Asian/Pacific Islander) of student success seminar participants (n = 22) and nonparticipants (n = 8). Results indicated that there was not a significant difference in persistence to the fourth-year χ^2 (1, N = 30) = 1.55, p < .2121 for student success seminar participants. These results suggest that participating in student success seminar does not influence fourth-year persistence based on being Asian/Pacific Islander.

Chi-square analyses were conducted to compare persistence to the fourth-year for subgroups (i.e., Hispanic) of student success seminar participants (n = 2) and nonparticipants (n = 0). Results indicated that there was not a significant difference in persistence to the fourth-year χ^2 (1, N = 2) = .71, p < .3968 for student success seminar participants. These results

suggest that participating in student success seminar does not influence fourth-year persistence based on being Hispanic.

Chi-square analyses were conducted to compare persistence to the fourth-year for subgroups (i.e., Other ethnicity) of student success seminar participants (n = 31) and nonparticipants (n = 19). Results indicated that there was not a significant difference in persistence to the fourth-year χ^2 (1, N = 50) = .23, $p < .6278$ for student success seminar participants. These results suggest that participating in student success seminar does not influence fourth-year persistence based on students identifying as Other ethnicity.

Chi-square analyses were conducted to compare persistence to the fourth-year for subgroups (i.e., 12 + Credit hours/Full-time) of student success seminar participants (n = 157) and nonparticipants (n = 35). Results indicated that there was not a significant difference in persistence to the fourth-year χ^2 (1, N = 192) = 2.23, $p < .1348$ for student success seminar participants. These results suggest that participating in student success seminar does not influence fourth-year persistence based on students enrolled in 12 or more credits.

Chi-square analyses were conducted to compare persistence to the fourth-year for subgroups (i.e., < 12 Credits/Part-time) of student success seminar participants (n = 47) and nonparticipants (n = 44). Results indicated that there was not a significant difference in persistence to the fourth-year χ^2 (1, N = 91) = .32, $p < .5669$ for student success seminar participants. These results suggest that participating in student success seminar does not influence fourth-year persistence based on being enrolled in less than 12 credits.

Chi-square analyses were conducted to compare persistence to the fourth-year for subgroups (i.e., High school graduate) of student success seminar participants (n = 192) and nonparticipants (n = 74). Results indicated that there was not a significant difference in

persistence to the fourth-year χ^2 (1, N = 266) = 1.05, p < .3051 for student success seminar participants. These results suggest that participating in student success seminar does not influence fourth-year persistence based on being a high school graduate.

Chi-square analyses were conducted to compare persistence to the fourth-year for subgroups (i.e., GED) of student success seminar participants (n = 10) and nonparticipants (n = 5). Results indicated that there was not a significant difference in persistence to the fourth-year χ^2 (1, N = 15) = .71, p < .3990 for student success seminar participants. These results suggest that participating in student success seminar does not influence fourth-year persistence based on earning a GED.

Chi-square analyses were conducted to compare persistence to the fourth-year for subgroups (i.e., No transfer intent) of student success seminar participants (n = 74) and nonparticipants (n = 35). Results indicated that there was not a significant difference in persistence to the fourth-year χ^2 (1, N = 109) = .01, p < .9322 for student success seminar participants. These results suggest that participating in student success seminar does not influence fourth-year persistence based on no intent to transfer.

Chi-square analyses were conducted to compare persistence to the fourth-year for subgroups (i.e., Intent to transfer) of student success seminar participants (n = 130) and nonparticipants (n = 44). Results indicated that there was not a significant difference in persistence to the fourth-year χ^2 (1, N = 174) = 1.06, p < .3033 for student success seminar participants. These results suggest that participating in student success seminar does not influence fourth-term persistence based on intent to transfer.

Table 24

Persistence To The Fourth-Year by Participation and Subgroup Identification

Subgroup	Participants n	Participants % Persisted	Nonparticipants n	Nonparticipants % Persisted
Total	204/1520	13%	79/652	12%
Age group				
Over 25	33	12%	14	13%
Under 25	171	14%	65	12%
Gender				
Female	111	14%	51	14%
Male	92	13%	28	10%
Ethnicity				
White	114	13%	40	12%
Af. American	18	12%	3	6%
Asian/Pac. Islander	22	20%	8	11%
Hispanic	2	10%	0	0%
Other	31	13%	19	16%
Initial enrollment status				
Full-time (12 + hours)	157	14%	35	11%
Part-time (< 12 hours)	47	12%	44	14%
High school performance				
High school graduate	192	14%	74	12%
GED recipient	10	8%	5	16%
Degree intent				
Did not plan to transfer	74	13%	35	13%
Planned to transfer	130	14%	44	12%

Findings related to graduation

Research question four investigated the relationship between participation in a community college student success seminar and graduation rates. Chi-square analyses were

conducted to test short and long-term graduation rates. In each chi-square analysis, a 2 x 2 contingency table was utilized.

Research Question IV. How did participation in a community college student success seminar influence student graduation rates compared to nonparticipants?

(a) There was no significant difference between participants and nonparticipants in rates of graduation by the end of the second year; and

(b) There was no significant difference between participants and nonparticipants in rates of graduation by the end of the third year

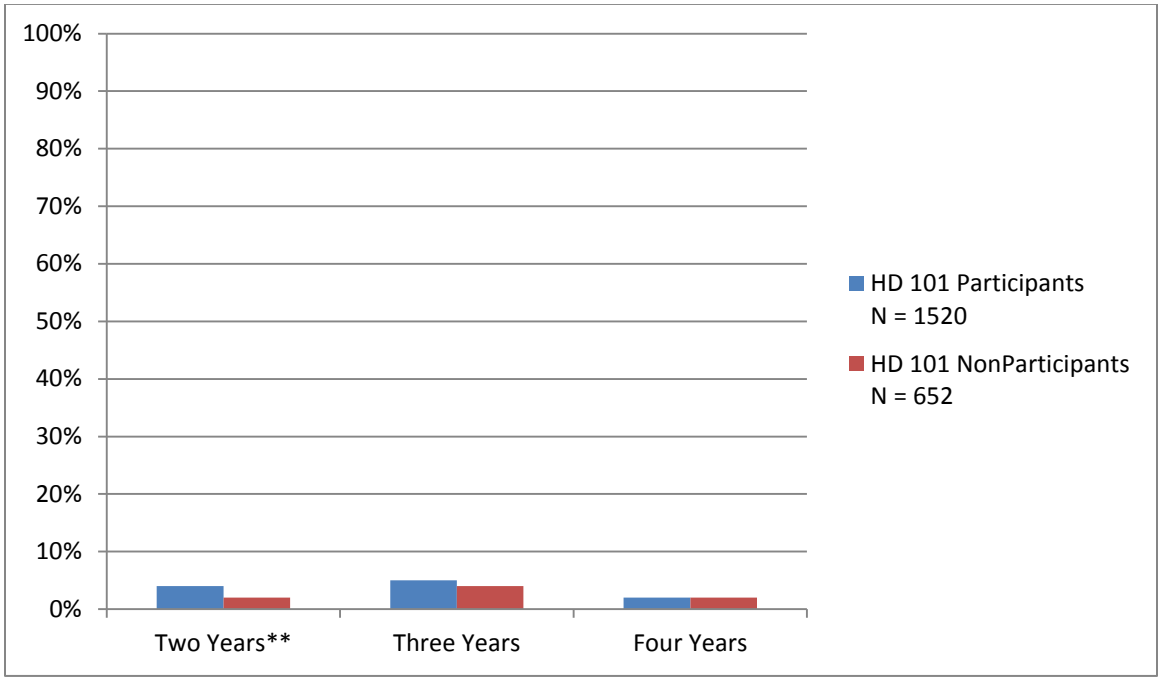
(c) There was no significant difference between participants and nonparticipants in rates of graduation by the end of the fourth year.

Due to the decline in N for each of the 2007, 2008, and 2009 cohorts of student success seminar participants and nonparticipants that graduated within two, three, and four years, all three cohorts were combined. This was done to help establish a larger N necessary to conduct a data analyses as well as add statistical power to the analyses that would not otherwise be weaker if the cohorts were separated. In addition, combining the cohorts for this research question will still reflect a trend if there is one present. As indicated in Table 25, graduation rates for both participants and nonparticipants were dismal. Chi-square analyses were conducted to compare second-year graduation rates for student success seminar participants ($n = 58$) and nonparticipants ($n = 13$). Results indicated that there was a significant difference in two-year graduation rates $\chi^2 (1, N = 61) = 4.23$, $p < .0397$ for student success seminar participants. These results suggest that participating in a student success seminar has an influence on two-year graduation rates. Chi-square analyses revealed no significant difference in participating in student success seminar and graduation rates in the third or fourth year compared to

nonparticipants. Out of the combined three cohorts of participants, 4% (n = 58) graduated in two years as opposed to 2% (n = 13) of nonparticipants; 5% (n = 77) more graduated within three years compared to 4% (n = 23) of nonparticipants; and lastly, 2% (n = 29) more of participants graduated within four years comparable to the 2% (n = 16) of nonparticipants. In combining 2nd and 3rd year graduation rates, there is a total of 9% (n = 135) of participants graduating in three years compared to 6% of nonparticipants. Additionally, when combining 2nd, 3rd, and 4th year graduation rates of participants, there is a total of 11% (n = 270) compared to 8% (n = 52) of nonparticipants.

Table 25

Graduation Rates by Combined 2007; 2008; and 2009 Fall Cohorts



P < .05**

Subgroups. Additional chi-square analyses were conducted to explore whether or not participation in a student success seminar impacted the graduation rates of subgroups of students differently. Subgroups were defined according to age, gender, ethnicity, high school

performance, initial enrollment status, and degree intent. Due to the similarities of the 2007, 2008, and 2009 populations of participants and nonparticipants, the three cohorts were combined providing for a larger n (participants n = 1520; nonparticipants n = 652).

Chi-square analyses were conducted to compare second-year graduation rates for subgroups (i.e., Over 25 years of age) of student success seminar participants (n = 17) and nonparticipants (n = 6). As indicated in Table 26, results show that there was no significant difference in two-year graduation rates χ^2 (1, N = 23) = .01, $p < .9596$ for student success seminar participants. These results suggest that participating in student success seminar does not influence second-year graduation rates based on being over 25 years of age.

Chi-square analyses were conducted to compare second-year graduation rates for subgroups (i.e., Under 25 years of age) of student success seminar participants (n = 41) and nonparticipants (n = 7). Results indicated that there was a significant difference in two-year graduation rates χ^2 (1, N = 48) = 5.02, $p < .0250$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on second-year graduation rates based on being under 25 years of age.

Chi-square analyses were conducted to compare second-year graduation rates for subgroups (i.e., Female) of student success seminar participants (n = 36) and nonparticipants (n = 7). Results indicated that there was a significant difference in two-year graduation rates χ^2 (1, N = 43) = 4.11, $p < .0426$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on second-year graduation rates based on being female.

Chi-square analyses were conducted to compare second-year graduation rates for subgroups (i.e., Male) of student success seminar participants (n = 32) and nonparticipants (n =

6). Results indicated that there was no significant difference in two-year graduation rates χ^2 (1, N = 38) = 2.63, $p < .1043$ for student success seminar participants. These results suggest that participating in student success seminar does not influence second-year graduation rates based on being male.

Chi-square analyses were conducted to compare second-year graduation rates for subgroups (i.e., White) of student success seminar participants (n = 34) and nonparticipants (n = 8). Results indicated that there was no significant difference in two-year graduation rates χ^2 (1, N = 42) = 1.61, $p < .2042$ for student success seminar participants. These results suggest that participating in student success seminar does not influence second-year graduation rates based on being White.

Chi-square analyses were conducted to compare second-year graduation rates for subgroups (i.e., African-American) of student success seminar participants (n = 4) and nonparticipants (n = 1). Results indicated that there was no significant difference in two-year graduation rates χ^2 (1, N = 5) = .05, $p < .8215$ for student success seminar participants. These results suggest that participating in student success seminar does not influence second-year graduation rates based on being African-America.

Chi-square analyses were conducted to compare second-year graduation rates for subgroups (i.e., Asian/Pacific Islander) of student success seminar participants (n = 9) and nonparticipants (n = 2). Results indicated that there was no significant difference in two-year graduation rates χ^2 (1, N = 11) = 1.22, $p < .2685$ for student success seminar participants. These results suggest that participating in student success seminar does not influence second-year graduation rates based on being Asian/Pacific Islander.

Because of the reduced number of Hispanic students remaining in the sample at the end of the second-year (participant n = 0 and nonparticipant n = 0), no analyses were conducted to examine whether or not participation in student success seminar impacted second-year graduation rates for Hispanic students.

Chi-square analyses were conducted to compare second-year graduation rates for subgroups (i.e., Other ethnicity) of student success seminar participants (n = 5) and nonparticipants (n = 1). Results indicated that there was no significant difference in two-year graduation rates χ^2 (1, N = 6) = .22, $p < .6392$ for student success seminar participants. These results suggest that participating in student success seminar does not influence second-year graduation rates based on students identifying as Other ethnicity.

Chi-square analyses were conducted to compare second-year graduation rates for subgroups (i.e., 12 + Credit hours/Full-time) of student success seminar participants (n = 51) and nonparticipants (n = 7). Results indicated that there was no significant difference in two-year graduation rates χ^2 (1, N = 58) = 3.59, $p < .0580$ for student success seminar participants. These results suggest that participating in student success seminar does not influence second-year graduation rates based on students enrolled in 12 or more credits.

Chi-square analyses were conducted to compare second-year graduation rates for subgroups (i.e., < 12 Credits/Part-time) of student success seminar participants (n = 7) and nonparticipants (n = 6). Results indicated that there was no significant difference in two-year graduation rates χ^2 (1, N = 13) = .01, $p < .9075$ for student success seminar participants. These results suggest that participating in student success seminar does not influence second-year graduation rates based on being enrolled in less than 12 credits.

Chi-square analyses were conducted to compare second-year graduation rates for subgroups (i.e., High school graduate) of student success seminar participants (n = 53) and nonparticipants (n = 11). Results indicated that there was a significant difference two-year graduation rates χ^2 (1, N = 64) = 5.04, $p < .0247$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on second-year graduation rates based on being a high school graduate.

Chi-square analyses were conducted to compare second-year graduation rates for subgroups (i.e., GED) of student success seminar participants (n = 5) and nonparticipants (n = 1). Results indicated that there was no significant difference in two-year graduation rates χ^2 (1, N = 6) = .08, $p < .7673$ for student success seminar participants. These results suggest that participating in student success seminar does not influence second-year graduation rates based on earning a GED.

Chi-square analyses were conducted to compare second-year graduation rates for subgroups (i.e., No transfer intent) of student success seminar participants (n = 17) and nonparticipants (n = 6). Results indicated that there was no significant difference in two-year graduation rates χ^2 (1, N = 23) = .13, $p < .7152$ for student success seminar participants. These results suggest that participating in student success seminar does not influence second-year graduation rates based on no intent to transfer.

Chi-square analyses were conducted to compare second-year graduation rates for subgroups (i.e., Intent to transfer) of student success seminar participants (n = 41) and nonparticipants (n = 7). Results indicated that there was a significant difference in two-year graduation rates χ^2 (1, N = 48) = 4.25, $p < .0391$ for student success seminar participants. These

results suggest that participating in student success seminar has an influence on second-year graduation rates based on intent to transfer.

Table 26

Second-Year Graduation Rates by Participation and Subgroup Identification

Subgroup	Participants	% Graduated	Nonparticipants	% Graduated
	n		n	
Total	58/1520	4%	13/652	2%
Age group				
Over 25	17	6%	6	6%
Under 25	41	3%**	7	1%**
Gender				
Female	36	62%**	7	54%**
Male	32	55%	6	46%
Ethnicity				
White	34	59%	8	62%
Af. American	4	7%	1	8%
Asian/Pac. Islander	9	16%	2	15%
Hispanic	0	0%	0	0%
Other	5	9%	1	8%
Initial enrollment status				
Full-time (12 + hours)	51	88%	7	54%
Part-time (< 12 hours)	7	12%	6	46%
High school performance				
High school graduate	53	91%**	11	85%**
GED recipient	5	9%	1	8%
Degree intent				
Did not plan to transfer	17	29%	6	46%
Planned to transfer	41	71%**	7	54%**

P < .05**

Chi-square analyses were conducted to compare third-year graduation rates for subgroups (i.e., Over 25 years of age) of student success seminar participants (n = 15) and nonparticipants (n = 6). As indicated in Table 27, results show that there was no significant difference in three-year graduation rates χ^2 (1, N = 21) = .00, p < .9874 for student success seminar participants. These results suggest that participating in student success seminar does not influence third-year graduation rates based on being over 25 years of age.

Chi-square analyses were conducted to compare third-year graduation rates for subgroups (i.e., Under 25 years of age) of student success seminar participants (n = 62) and nonparticipants (n = 17). Results indicated that there was no significant difference in three-year graduation rates χ^2 (1, N = 79) = 2.59, p < .1074 for student success seminar participants. These results suggest that participating in student success seminar does not influence third-year graduation rates based on being under 25 years of age.

Chi-square analyses were conducted to compare third-year graduation rates for subgroups (i.e., Female) of student success seminar participants (n = 48) and nonparticipants (n = 15). Results indicated that there was no significant difference in three-year graduation rates χ^2 (1, N = 63) = 1.48, p < .2230 for student success seminar participants. These results suggest that participating in student success seminar does not influence third-year graduation rates based on being female.

Chi-square analyses were conducted to compare third-year graduation rates for subgroups (i.e., Male) of student success seminar participants (n = 29) and nonparticipants (n = 8). Results indicated that there was no significant difference in three-year graduation rates χ^2 (1, N = 37) = .70, p < .4026 for student success seminar participants. These results suggest that participating in student success seminar does not influence third-year graduation rates based on being male.

Chi-square analyses were conducted to compare third-year graduation rates for subgroups (i.e., White) of student success seminar participants (n = 41) and nonparticipants (n = 10). Results indicated that there was no significant difference in three-year graduation rates χ^2 (1, N = 51) = 1.81, $p < .1775$ for student success seminar participants. These results suggest that participating in student success seminar does not influence third-year graduation rates based on being White.

Chi-square analyses were conducted to compare third-year graduation rates for subgroups (i.e., African-American) of student success seminar participants (n = 2) and nonparticipants (n = 0). Results indicated that there was no significant difference in three-year graduation rates χ^2 (1, N = 2) = .64, $p < .4211$ for student success seminar participants. These results suggest that participating in student success seminar does not influence third-year graduation rates based on being African-America.

Chi-square analyses were conducted to compare third-year graduation rates for subgroups (i.e., Asian/Pacific Islander) of student success seminar participants (n = 8) and nonparticipants (n = 4). Results indicated that there was no significant difference in three-year graduation rates χ^2 (1, N = 12) = .01, $p < .9435$ for student success seminar participants. These results suggest that participating in student success seminar does not influence third-year graduation rates based on being Asian/Pacific Islander.

Chi-square analyses were conducted to compare third-year graduation rates for subgroups (i.e., Hispanic) of student success seminar participants (n = 2) and nonparticipants (n = 0). Results indicated that there was no significant difference in three-year graduation rates χ^2 (1, N = 2) = .71, $p < .3968$ for student success seminar participants. These results suggest that

participating in student success seminar does not influence third-year graduation rates based on being Hispanic.

Chi-square analyses were conducted to compare third-year graduation rates for subgroups (i.e., Other ethnicity) of student success seminar participants (n = 15) and nonparticipants (n = 5). Results indicated that there was no significant difference in three-year graduation rates χ^2 (1, N = 20) = .39, $p < .5283$ for student success seminar participants. These results suggest that participating in student success seminar does not influence third-year graduation rates based on students identifying as Other ethnicity.

Chi-square analyses were conducted to compare third-year graduation rates for subgroups (i.e., 12 + Credit hours/Full-time) of student success seminar participants (n = 51) and nonparticipants (n = 11). Results indicated that there was no significant difference in three-year graduation rates χ^2 (1, N = 70) = 1.64, $p < .1992$ for student success seminar participants. These results suggest that participating in student success seminar does not influence third-year graduation rates based on students enrolled in 12 or more credits.

Chi-square analyses were conducted to compare third-year graduation rates for subgroups (i.e., < 12 Credits/Part-time) of student success seminar participants (n = 18) and nonparticipants (n = 12). Results indicated that there was no significant difference in three-year graduation rates χ^2 (1, N = 30) = .10, $p < .7441$ for student success seminar participants. These results suggest that participating in student success seminar does not influence third-year graduation rates based on being enrolled in less than 12 credits.

Chi-square analyses were conducted to compare third-year graduation rates for subgroups (i.e., High school graduate) of student success seminar participants (n = 72) and nonparticipants (n = 20). Results indicated that there was no significant difference in three graduation rates χ^2

(1, N = 92) = 3.21, $p < .0729$ for student success seminar participants. These results suggest that participating in student success seminar does not influence third-year graduation rates based on being a high school graduate.

Chi-square analyses were conducted to compare third-year graduation rates for subgroups (i.e., GED) of student success seminar participants (n = 4) and nonparticipants (n = 3). Results indicated that there was no significant difference in three-year graduation rates χ^2 (1, N = 7) = .87, $p < .3491$ for student success seminar participants. These results suggest that participating in student success seminar does not influence third-year graduation rates based on earning a GED.

Chi-square analyses were conducted to compare third-year graduation rates for subgroups (i.e., No transfer intent) of student success seminar participants (n = 29) and nonparticipants (n = 7). Results indicated that there was a significant difference in three-year graduation rates χ^2 (1, N = 36) = 11.42, $p < .0007$ for student success seminar participants. These results suggest that participating in student success seminar has an influence on third-year graduation rates based on no intent to transfer.

Chi-square analyses were conducted to compare third-year graduation rates for subgroups (i.e., Intent to transfer) of student success seminar participants (n = 48) and nonparticipants (n = 16). Results indicated that there was no significant difference in three-year graduation rates χ^2 (1, N = 64) = .31, $p < .5764$ for student success seminar participants. These results suggest that participating in student success seminar does not influence third-year graduation rates based on intent to transfer.

Table 27

Third-Year Graduation Rates by Participation and Subgroup Identification

Subgroup	Participants		Nonparticipants	
	n	% Graduated	n	% Graduated
Total	77/1520	5%	23/652	4%
Age group				
Over 25	15	6%	6	6%
Under 25	62	5%	17	3%
Gender				
Female	48	6%	15	4%
Male	29	4%	8	3%
Ethnicity				
White	41	5%	10	3%
Af. American	2	1%	0	0%
Asian/Pac. Islander	8	7%	4	6%
Hispanic	2	10%	0	0%
Other	15	6%	5	4%
Initial enrollment status				
Full-time (12 + hours)	59	5%	11	3%
Part-time (< 12 hours)	18	4%	12	4%
High school performance				
High school graduate	72	5%	20	3%
GED recipient	4	4%	3	10%
Degree intent				
Did not plan to transfer	29	5%*	7	3%*
Planned to transfer	48	5%	16	4%

P < .01*

Chi-square analyses were conducted to compare fourth-year graduation rates for subgroups (i.e., Over 25 years of age) of student success seminar participants (n = 7) and

nonparticipants (n = 1). As indicated in Table 28, results show that there was no significant difference in four-year graduation rates χ^2 (1, N = 8) = .39, p < .5286 for student success seminar participants. These results suggest that participating in student success seminar does not influence fourth-year graduation rates based on being over 25 years of age.

Chi-square analyses were conducted to compare fourth-year graduation rates for subgroups (i.e., Under 25 years of age) of student success seminar participants (n = 22) and nonparticipants (n = 15). Results indicated that there was no significant difference in four-year graduation rates χ^2 (1, N = 37) = 1.39, p < .2383 for student success seminar participants. These results suggest that participating in student success seminar does not influence fourth-year graduation rates based on being under 25 years of age.

Chi-square analyses were conducted to compare fourth-year graduation rates for subgroups (i.e., Female) of student success seminar participants (n = 17) and nonparticipants (n = 8). Results indicated that there was no significant difference in four-year graduation rates χ^2 (1, N = 25) = .01, p < .9604 for student success seminar participants. These results suggest that participating in student success seminar does not influence fourth-year graduation rates based on being female.

Chi-square analyses were conducted to compare fourth-year graduation rates for subgroups (i.e., Male) of student success seminar participants (n = 12) and nonparticipants (n = 8). Results indicated that there was no significant difference in four-year graduation rates χ^2 (1, N = 20) = .69, p < .4035 for student success seminar participants. These results suggest that participating in student success seminar does not influence fourth-year graduation rates based on being male.

Chi-square analyses were conducted to compare fourth-year graduation rates for subgroups (i.e., White) of student success seminar participants (n = 23) and nonparticipants (n = 9). Results indicated that there was no significant difference in four-year graduation rates χ^2 (1, N = 32) = .01, $p < .9152$ for student success seminar participants. These results suggest that participating in student success seminar does not influence fourth-year graduation rates based on being White.

Chi-square analyses were conducted to compare fourth-year graduation rates for subgroups (i.e., African-American) of student success seminar participants (n = 0) and nonparticipants (n = 2). Results indicated that there was no significant difference in four-year graduation rates χ^2 (1, N = 2) = 2.82, $p < .0927$ for student success seminar participants. These results suggest that participating in student success seminar does not influence fourth-year graduation rates based on being African-America.

Chi-square analyses were conducted to compare fourth-year graduation rates for subgroups (i.e., Asian/Pacific Islander) of student success seminar participants (n = 3) and nonparticipants (n = 2). Results indicated that there was no significant difference in four-year graduation rates χ^2 (1, N = 5) = .01, $p < .9428$ for student success seminar participants. These results suggest that participating in student success seminar does not influence fourth-year graduation rates based on being Asian/Pacific Islander.

Because of the reduced number of Hispanic students remaining in the sample at the end of the fourth-year (participant n = 0 and nonparticipant n = 0), no analyses were conducted to examine whether or not participation in student success seminar impacted four-year graduation rates for Hispanic students.

Chi-square analyses were conducted to compare fourth-year graduation rates for subgroups (i.e., Other ethnicity) of student success seminar participants (n = 2) and nonparticipants (n = 0). Results indicated that there was no significant difference in four-year graduation rates χ^2 (1, N = 2) = .06, p < .7959 for student success seminar participants. These results suggest that participating in student success seminar does not influence fourth-year graduation rates based on students identifying as Other ethnicity.

Chi-square analyses were conducted to compare fourth-year graduation rates for subgroups (i.e., 12 + Credit hours/Full-time) of student success seminar participants (n = 22) and nonparticipants (n = 9). Results indicated that there was no significant difference in four-year graduation rates χ^2 (1, N = 31) = .40, p < .5259 for student success seminar participants. These results suggest that participating in student success seminar does not influence fourth-year graduation rates based on students enrolled in 12 or more credits.

Chi-square analyses were conducted to compare fourth-year graduation rates for subgroups (i.e., < 12 Credits/Part-time) of student success seminar participants (n = 7) and nonparticipants (n = 7). Results indicated that there was no significant difference in four-year graduation rates χ^2 (1, N = 14) = .02, p < .8875 for student success seminar participants. These results suggest that participating in student success seminar does not influence fourth-year graduation rates based on being enrolled in less than 12 credits.

Chi-square analyses were conducted to compare fourth-year graduation rates for subgroups (i.e., High school graduate) of student success seminar participants (n = 26) and nonparticipants (n = 16). Results indicated that there was no significant difference in four-year graduation rates χ^2 (1, N = 42) = .77, p < .3789 for student success seminar participants. These

results suggest that participating in student success seminar does not influence fourth-year graduation rates based on being a high school graduate.

Chi-square analyses were conducted to compare fourth-year graduation rates for subgroups (i.e., GED) of student success seminar participants (n = 2) and nonparticipants (n = 0). Results indicated that there was no significant difference in four-year graduation rates χ^2 (1, N = 2) = .55, $p < .4557$ for student success seminar participants. These results suggest that participating in student success seminar does not influence fourth-year graduation rates based on earning a GED.

Chi-square analyses were conducted to compare fourth-year graduation rates for subgroups (i.e., No transfer intent) of student success seminar participants (n = 13) and nonparticipants (n = 5). Results indicated that there was no significant difference in four-year graduation rates χ^2 (1, N = 18) = .01, $p < .9120$ for student success seminar participants. These results suggest that participating in student success seminar does not influence fourth-year graduation rates based on no intent to transfer.

Chi-square analyses were conducted to compare fourth-year graduation rates for subgroups (i.e., Intent to transfer) of student success seminar participants (n = 16) and nonparticipants (n = 11). Results indicated that there was no significant difference in four-year graduation rates χ^2 (1, N = 27) = 1.34, $p < .2455$ for student success seminar participants. These results suggest that participating in student success seminar does not influence fourth-year graduation rates based on intent to transfer.

Table 28

Fourth-Year Graduation Rates by Participation and Subgroup Identification

Subgroup	Participants		Nonparticipants	
	n	% Graduated	n	% Graduated
Total	29/1520	2%	16/652	2%
Age group				
Over 25	7	3%	1	1%
Under 25	22	2%	15	3%
Gender				
Female	17	2%	8	2%
Male	12	2%	8	3%
Ethnicity				
White	23	3%	9	3%
Af. American	0	0%	2	4%
Asian/Pac. Islander	3	3%	2	3%
Hispanic	0	0%	0	0%
Other	2	1%	2	1%
Initial enrollment status				
Full-time (12 + hours)	22	2%	9	3%
Part-time (< 12 hours)	7	2%	7	2%
High school performance				
High school graduate	26	2%	16	3%
GED recipient	2	2%	0	0%
Degree intent				
Did not plan to transfer	13	2%	5	2%
Planned to transfer	16	2%	11	3%

Chapter summary

The purpose of this chapter was to present the findings and discussion of the data analyses conducted to answer the five research questions posed for the study. The relationships between participation in a mandatory, mixed-format student success seminar and short and long-term academic performance, persistence, credit hour completion, and graduation were examined. The possibility that participation in a student success seminar impacted the performance, persistence, and graduation of subgroups of students differently was also explored for subgroups identified by age, gender, ethnicity, high school experience, initial enrollment status, and degree intent.

The sample consisted of two groups of students, participants (n = 1520) and nonparticipants (n = 652) who were identified according to being in college for the first time, never have taken student success seminar, and placed in developmental English. The total population of participants and nonparticipants is the result of combining the fall 2007, 2008, and 2009 fall cohorts. The three cohorts were combined as they all represent the same characteristics, in addition, increasing the total population size adds strength to the statistical analyses. Research question one and the related hypothesis examined the differences in grade point averages of students who participated in student success seminar to students who did not participate in student success seminar. Unpaired t-tests were conducted to compare grade point averages of participants and nonparticipants at the end of each of the following intervals: first-term, second-term, third-term, second-year, third-year, and fourth-year. Statistically significant relationships were found between participation in student success seminar and grade point average measured at only one of the intervals: first-term. Students who participated in student success seminar had significantly higher first-term grade point averages than students who did

not participate in student success seminar. There was no statistically significant relationship between course participants and nonparticipants for second-term, third-term, second-year, third-year, and fourth-year grade point average.

Further analysis revealed differences in the impact of participation on grade point average related to subgroups. An analysis of first-term grade point average revealed a statistically significant relationship between participation and the following subgroups: over 25 years of age, under 25 years of age, male, high school graduate, and plan to transfer. There was a statistically significant relationship between participation and second-term grade point average for students under 25 years of age, male, Hispanic, enrolled in less than 12 credit hours, and students earning a GED. It should be noted, however, that the size of the Hispanic population in the analysis is very small consequently lacking in the ability to generalize results. An analysis of third-term and second-year grade point average revealed no effect based on any of the 15 subgroups. In analyzing third-year grade point average, there was a statistically significant relationship between participation and grade point average for students under 25 years of age, female, white, enrolled in 12 or more credit hours, high school graduate and plan to transfer. Lastly, there was a significant relationship between participation and fourth-year grade point average for only one subgroup: white ethnicity.

Research question two and the related hypothesis examined the differences in credit hours earned of students who participated in student success seminar to students who did not participate in student success seminar. Unpaired t-tests were conducted to compare credit hours earned of participants and nonparticipants at the end of each of the following intervals: first-term, second-term, third-term, second-year, third-year, and fourth-year. There were no

statistically significant relationships found between participation in student success seminar and credit hours earned through any one of the intervals measured.

Further analysis revealed differences in the impact of participation on credit hours earned related to subgroups. An analysis of first-term credit hours earned revealed a statistically significant relationship between participation and the following subgroups: male enrolled in 12 or more credits, and enrolled in fewer than 12 credits or part-time. There was a statistically significant relationship between participation and second-term credit hours earned for only one subgroup: African-American. An analysis of third-term credit hours earned revealed a significant relationship between participation and one subgroup: white ethnicity. An analysis of second-year credit hours earned revealed no effect related to any of the 15 subgroups. In analyzing third-year credit hours earned, there was a statistically significant relationship between participation and grade point average for African-American and Other ethnicity. Lastly, there was a significant relationship between participation and fourth-year credit hours earned for the following subgroups: male, Asian/Pacific Islander, and students intending to transfer.

Research question three and the related hypothesis examined the differences in the persistence of students who participated in student success seminar to students who did not participate in student success seminar. Chi-square analyses were conducted to compare the persistence of participants and nonparticipants at the end of each of the following intervals: first-term, second-term, third-term, second-year, third-year, and fourth-year. Statistically significant relationships were found between participation in student success seminar and persistence measured at five intervals: first-term, second-term, third-term, second-year, and third-year. Students who participated in student success seminar persisted at a significantly higher rate than students who did not participate in student success seminar. There was no statistically

significant relationship between course participants and nonparticipants for persisting to the fourth-year of college.

Further analysis revealed differences in the impact of participation on persistence related to subgroups. There was a statistically significant relationship between participation and second-term persistence for students over 25 years of age, under 25 years of age, female, male, white, Asian/Pacific Islander, other ethnicity, 12 + credit/full-time, and high school graduate. An analysis of third-term persistence revealed a statistically significant relationship between participating in a student success seminar and the following subgroups: Under 25 years of age, female, male, white, Asian/Pacific Islander, other ethnicity, 12 + credits/full-time, high school graduate, no transfer intent, and intent to transfer. In analyzing second-year persistence there was a statistically significant relationship between participation and persistence for the following subgroups: Under 25 years of age, female, male, white, Asian/Pacific Islander, other ethnicity, 12 + credits/full-time, high school graduate, no transfer intent, and intent to transfer. The following subgroups were determined to have a statistically significant effect on third-year persistence based on participating in student success seminar: Under 25 years of age, female, male, white, 12 + credits/full-time, high school graduate, and no transfer intent. Lastly, there was no significant relationship between participation in student success seminar and persistence to the fourth-year for any of the 15 subgroups.

Research question four and the related hypothesis examined the differences in graduation rates of students who participated in student success seminar to students who did not participate in student success seminar. Chi-square analyses were conducted to compare the graduation rates of participants and nonparticipants at the end of each of the following intervals: second-year, third-year, and fourth-year. Statistically significant relationships were found between

participation in student success seminar and graduation rates for one interval: second-year. There was no statistically significant difference for students participating in student success seminar and graduation in the third or fourth-years. It should be noted that the size of the populations were so small that the significance of the impact of the student success seminar on graduation is limited in statistical power.

Further analysis revealed differences in the impact of participation on graduation rates related to subgroups. There was a statistically significant relationship between participation and graduating in two-years for students under 25 years of age, female, high school graduate, and have an intent to transfer. An analysis of third-year graduation rates revealed a statistically significant relationship between participating in student success seminar and one subgroup: no intent to transfer. Lastly, in analyzing fourth-year graduation rates, there was no statistically significant relationship between participation and any of the 15 subgroups.

Chapter 5: Discussion of Findings

Committed to the open-door philosophy, community colleges serve many students who might not otherwise have the opportunity to participate in education beyond high school. Students who may not be prepared socially, academically, or economically are welcomed to enroll (Cohen & Brawer, 1996; Roueche & Rouesche, 1993). Recognizing the challenges that these students face, community colleges have implemented a variety of interventions aimed at easing students' integration into the college environment and improving their performance and persistence (Astin, 1984; Pascarella & Terenzini, 2005; Tinto, 1998). Student success seminars are a specific example of such an intervention. Findings from the Second National Survey of First-Year Academic Practices show that out of 1,000 U.S. institutions responding, 94.1% indicate they offer a student success seminar (Barefoot, 2002).

Although content and delivery of student success seminars differ among institutions, most help students identify campus resources, establish relationships with other students and faculty, and assess and improve their academic and life management skills (Barefoot, 2000; Barefoot & Fidler, 1996). It is intended that such a course design will help students integrate into the college environment both academically and socially. Such integration is believed to then improve student performance and persistence (Astin, 1984; Pascarella, 1985; Tinto, 1975).

Previous research suggested a positive relationship between participation in a student success seminar and improved short-term persistence and academic performance (Barefoot & Gardner, 1993; Cuseo, 1991; Cuseo & Barefoot, 1996; Donnangelo & SantaRita, 1982; Smacchi, 1991; Stovall, 1999; Walls, 1996). Short-term results however, do not guarantee long-term results. Little was known about the impact that student success seminars have on long-term persistence, academic performance, and ultimately graduation of community college students. Furthermore, research regarding student success seminar participants has general considered community college students as one homogenous group. Little was known about how the course impacts subgroups of students differently.

The purpose of this study was to examine the influence of participation in a mandatory mixed-format student success seminar on short and long-term academic performance, persistence, and graduation. The study examined whether or not students who participated in such a course earned higher grades, completed a higher percentage of credits, enrolled for more terms, and graduated at higher rates during a four-year period following initial college enrollment. The study included examination of the differential impact of student success seminar participation for subgroups of students identified by age, gender, ethnicity, initial

enrollment status, high school performance, and degree intent. Five research questions were tested that provided direction for the study:

Research Questions

Question 1. How did participation in a community college student success seminar influence grade point averages compare to nonparticipants?

(a) There was no significant difference in the first-term grade point average of student success seminar participants compared to nonparticipants;

(b) There was no significant difference in the second-term grade point average of student success seminar participants when compared to nonparticipants;

(c) There was no significant difference in the third-term grade point average of student success seminar participants when compared to nonparticipants;

(d) There was no significant difference in the second-year grade point average of student success seminar participants when compared to nonparticipants;

(e) There was no significant difference in the third-year grade point average of student success seminar participants when compared to nonparticipants; and

(f) There was no significant difference in the fourth-year grade point average of student success seminar participants when compared to nonparticipants.

Question 2. How did participation in a community college student success seminar influence the number of credit hours earned compared to nonparticipants?

(a) There was no significant difference in first-term credit hour completion percentages of participants when compared to nonparticipants;

(b) There was no significant difference in the second-term credit hour completion percentages of participants when compared to nonparticipants;

(c) There was no significant difference in the third-term credit hour completion percentages of participants when compared to nonparticipants;

(d) There was no significant difference in the second-year credit hour completion percentages of participants when compared to nonparticipants;

(e) There was no significant difference in the third-year credit hour completion percentages of participants when compared to nonparticipants; and

(f) There was no significant difference in the fourth-year credit hour completion percentages of participants when compared to nonparticipants.

Question 3. How did participation in a community college student success seminar influence persistence compared to nonparticipants?

(a) There was no significant difference between student success seminar participants and nonparticipants in persistence to the second term;

(b) There was no significant difference between student success seminar participants and nonparticipants in persistence to the third term;

(c) There was no significant difference between student success seminar participants and nonparticipants in persistence to the second year;

(d) There was no significant difference between student success seminar participants and nonparticipants in persistence to the third year;

(e) There was no significant difference between student success seminar participants and nonparticipants in persistence to the fourth year.

Question 4. How did participation in a community college student success seminar influence graduation rates compared to nonparticipants?

(a) There was no significant difference between participants and nonparticipants in rates of graduation by the end of the second year; and

(b) There was no significant difference between participants and nonparticipants in rates of graduation by the end of the third year

(c) There was no significant difference between participants and nonparticipants in rates of graduation by the end of the fourth year.

Question 5. How did participation in a community college student success seminar impact grade point average, credit hours earned, persistence, and graduation differently for subgroups of students identified according to age, gender, ethnicity, high school performance, initial enrollment status, and degree intent?

This study was conducted using a longitudinal panel study research design. The sample consisted of all degree and/or certificate seeking students who placed in developmental English and enrolled for the first time during the fall 2007, 2008, and 2009 terms at one community college ($N = 2172$). The fall 2007, 2008, and 2009 populations were combined for three reasons: the populations were similar, the data provided for each fall cohort was in aggregate form, and combining all fall cohorts increases the statistical strength of the research. The sample was divided into two groups based on first-term participation ($n = 1520$) or nonparticipation ($n = 652$) in student success seminar. Both groups were followed for four years beyond initial enrollment at the community college.

The variable of greatest interest was participation in student success seminar; therefore, it was considered the major predictor variable. Using an alpha level of .05, the research questions were examined using either an unpaired t-test or chi-square analyses. The following four outcome variables were investigated: grade point average, credit hours earned, persistence, and graduation rates. Each was examined at several intervals over a four-year period. Additionally, the following extraneous variables previously reported to be related to student persistence and academic performance were analyzed: age, gender, ethnicity, high school performance, initial enrollment hours, and degree intent.

Summary of Findings

The specific findings of this study were reported in Chapter 4. The following narrative presents a summary of those findings.

Relationship Between Participation in a Student Success Seminar and Grade Point Average

Research question I examined the differences in grade point averages of students who participated in student success seminar to students who did not participate in such a course. An unpaired t-test was utilized to compare grade point averages at the end of the following intervals: first-term, second-term, third-term, second-year, third-year, and fourth-year.

Overall, the mean first-term grade point average for course participants was 2.618 compared to 2.469 for nonparticipants. This data supports findings from Donnangelo and SantaRita (1982), Belcher et al. (1987), Jones (1984), Smacchi (1991), and Stovall (1999) who also found a significant positive relationship between participation in a community college

student success seminar and first-term grade point average. The findings refute conclusions by Reis (1989), Rudmann (1992), and Walls (1996) who reported no significant difference in mean first-term grade point average of student success seminar participants and nonparticipants.

Additional analyses conducted in this study revealed significant differences in the impact of participation in a student success seminar on first-term grade point average according to being over 25 years of age, under 25 years of age, male, high school graduate, and do not plan to transfer. These findings are contrary to those reported by Belcher et al. (1987) and Stovall (1999) who found no significant differences with the said subgroups. Instead, they both found significant differences in first-term grade point average for ethnic subgroups. Students identified as other than white had a significantly higher increase in first-term grade point average than white students. Additionally, Reis (1989) had identified a significant difference for only one subgroup: intent to transfer.

The current study revealed no significant differences in mean second-term grade point averages of student success seminar participants and nonparticipants overall. These findings support research by Smacchi (1991), Stovall (1999), and Walls (1996) who found no significant relationship between student success seminar participation and second-term grade point average. In regards to subgroups, the study revealed a significant difference in mean second-term grade point average according to age, gender, ethnicity, initial enrollment status, and high school performance. However, the results are confounded and otherwise lack in explanation. Student participants that were male or Hispanic showed a significant difference in participating in a student success seminar and second-term grade point average. Yet, the following subgroups showed a significant difference in nonparticipation and second-term grade point average: under

25 years of age, part-time (< 12 hours), and high school experience. There is currently no literature that supports these results.

No significant differences were found in third-term or second-year grade point averages of student success seminar participants and nonparticipants overall nor according to age, gender, ethnicity, initial enrollment status, high school experience, or degree intent. These findings support former studies by Rudmann (1992), Smacchi (1991) and Stovall (1999). No significant differences were found in the third or fourth-year grade point average of student success seminar participants and nonparticipants overall. In regards to subgroups, the study revealed a significant difference in mean third-term grade point average according to under 25 years of age, female, enrolled in 12 or more credits/full-time, high school performance and students identifying as ethnically white. There was a statistically significant difference in student success seminar participation and fourth-year grade point average for one subgroup: students identifying as ethnically white. Again, there is currently no literature that supports or refutes these results.

Relationship Between Participation in a Student Success Seminar and Credit Hours Earned

Research question II examined the differences in credit hours earned for students who participated in student success seminar compared to students who did not participate in such a course. An unpaired t-test was utilized to compare credit hours earned at the end of the following intervals: first-term, second-term, third-term, second-year, third-year, and fourth-year.

Overall, the mean first-term credit hours earned for student success seminar participants was 11.225 compared to 11.585 for nonparticipants. This finding supports the finding of Walls (1996) that there is no significant difference in first-term credit hours earned of student success seminar participants and nonparticipants. However, this finding diverges from findings by

Stovall (1999) who found that participation in student success seminar was associated with an increase in first-term and second-term credit hour completion percentage.

Additional analyses conducted in this study revealed significant differences in the impact of participation in a student success seminar on first-term credit hours earned according to being male, and enrolled part-time or full. These findings are contrary to those reported by Stovall (1999) who found no significant difference in credit hours earned according to age, gender, ethnicity, initial enrollment status, high school performance, academic ability, declaration of program of study, or transfer intent.

There were no significant differences in second-term, third-term, second-year, third-year or fourth-year credit hours earned for student success seminar participants and nonparticipants overall. These findings support research by Stovall (1999) and Walls (1996) who found no significant relationship between student success seminar participation and second-term, second-year, and third-year credit hours earned. There is currently no literature regarding the influence of participating in a student success seminar and fourth-year credit hour completion. In regards to subgroups, the study revealed a significant difference in participating in student success seminar and mean second-term credit hours earned for one subgroup: African-American. There is currently no literature that supports these results. However, Stovall (1999) found a statistically significant relationship between student success seminar participation and credit hour completion percentage for males. There is currently no other literature that supports this finding.

The current study revealed a significant difference in mean third-term credit hours earned for student success seminar participants for one subgroup: student identified ethnically white. There is currently no literature that supports or refutes this finding. In regards to second-year credit hours earned for subgroups of student success seminar participants and nonparticipants,

there was no significance. The study revealed mixed findings related to the subgroups, African-American and Other ethnicity in relation to third-year credit hours earned. There was a statistically significant relationship between participating in student success seminar and third-year credit hours earned for the African –American subgroup. Conversely, there was a statistically significant influence between nonparticipation in student success seminar and credit hours earned for the subgroup other ethnicity. Again, there is no current literature that supports or refutes these findings as the current study was conducted at a college with a quarter system and the existing research has been based on semester colleges. In regards to fourth-year credit hours earned for subgroups, there was a significant difference between nonparticipants and credit hours earned for the male subgroup. Conversely, there was significant relationship between participation in student success seminar and fourth-year credit hours earned for the Asian/Pacific Islander subgroup. Lastly, there was a significant relationship between nonparticipants and credit hours earned for the subgroup of students that plan to transfer. Again, results regarding subgroups and credit hours earned are confounded which is consistent with the findings in existing literature.

Relationship Between Participation in a Student Success Seminar and Persistence

Research question III examined the persistence rates of students who participated in a student success seminar compared to students who did not participate in such a course. Persistence was measured by continuous enrollment. Overall, 1159/1520 or 76% student success seminar participants persisted to the second-term compared to 369/652 or 57% of nonparticipants. These findings support research by Belcher et al. (1987), Jones (1984), Reis (1986), Stovall (1999), and Walls (1996) whom all reported a significant positive relationship between participation in a student success seminar and persistence to the second-term of college.

Further analysis conducted for subgroups of students revealed a significant difference in persistence to the second-term and participating in student success seminar for the following subgroups: Over 25 years of age, under 25 year of age, female, male, white, Asian/Pacific Islander, Other ethnicity, 12 + credit hours/full-time, high school graduate, did not plan to transfer, and planned to transfer. The subgroups: African-American, < 12 credit hours/Part-time, GED, and Hispanic were not statistically significant. Previous research regarding the impact of participation in a student success seminar on persistence to the second-term for subgroups of students is inconsistent (Belcher et al., 1987; Rudmann, 1992; Sloan, 1991, Stovall, 1999). When examining the impact of participation on persistence to the second-term according age, gender, ethnicity, initial enrollment status, and placement levels, Belcher et al. (1987), Sloan (1991), and Stovall (1999) found no significant differences. However, Rudmann (1992) reported a significant difference in the impact of participation according to enrollment status. In that study, persistence to the second-term was significantly higher for full-time students who participated in student success seminar than for full-time students who did not participate.

In the current study, overall, 1059/1520 or 70% of students who participated in student success seminar persisted to the third-term compared to 339/652 or 52%. There is currently no existing literate that either supports or refutes these findings; primarily due to the existing study focusing on a quarter system institution and not a semester system.

Further analysis conducted for subgroups of students revealed a significant difference in persistence to the third-term and participating in student success seminar for the following subgroups: Under 25 year of age, female, male, white, Asian/Pacific Islander, Other ethnicity, 12 + credit hours/full-time, high school graduate, did not plan to transfer, and planned to transfer.

The subgroups: Over 25 years of age, African-American, < 12 credit hours/Part-time, GED, and Hispanic were not statistically significant. No existing studies refute or support these findings.

In examining persistence to the second-year for student success seminar participants compared to nonparticipants, there was a statistically significant relationship. Overall, 773/1520 or 51% of students who participated in student success seminar persisted to the second-year compared to 253/652 or 39% of nonparticipants. This supports the research by Belcher et al. (1987), Stovall (1999), and Walls (1996) who also reported a significant relationship between participation in student success seminar and persistence to the second-year.

Further analysis conducted for subgroups of students revealed a significant difference in persistence to the second-year and participating in student success seminar for the following subgroups: Under 25 years of age, female, male, white, Asian/Pacific Islander, Other ethnicity, 12 + credit hours/full-time, high school graduate, did not plan to transfer, and planned to transfer. The subgroups: Over 25 years of age, African-American, < 12 credit hours/Part-time, GED, and Hispanic were not statistically significant. These findings conflict with Belcher et al. (1987) and Stovall (1999); they found no significant difference in the influence of participating in a student success seminar on persistence to the second-year for subgroups.

In the current study, there was a significant difference found for students participating in student success seminar and persistence to the third-year compared to nonparticipants. Overall, 470/1520 or 31% of students who participated in student success seminar persisted to the third-year compared to 157/652 or 24% of nonparticipants. This data conflicts with findings from Stovall (1999), who reported no significant relationship between participation in student success seminar and persistence to the second-year compared to nonparticipants. There is currently no other literature that goes beyond the third-year.

Further analysis conducted for subgroups of students revealed a significant difference in persistence to the third-year and participating in student success seminar for the following subgroups: Under 25 years of age, female, male, white, 12 + credit hours/full-time, high school graduate, and did not plan to transfer. The subgroups: Over 25 years of age, African-American, < 12 credit hours/Part-time, GED, Asian/Pacific Islander, Other ethnicity, Hispanic, and planned to transfer were not statistically significant. This substantiates the results by Stovall (1999) who also found a significant difference in the impact of participation on persistence to the third-year according to one subgroup: Over 25 years of age and Under 25 years of age.

In the current study, there was no significant difference found for students participating in student success seminar and persistence to the fourth-year compared to nonparticipants. Overall, 204/1520 or 13% of students who participated in student success seminar persisted to the fourth-year compared to 79/652 or 12% of nonparticipants. This data is not supported or refuted by any existing literature. Further analysis conducted for the 15 subgroups of students that participated in a student success seminar revealed no significant difference in persistence to the fourth-year compared to nonparticipants. Again, current literature does not refute or support such findings.

Relationship Between Participation in a Student Success Seminar and Graduation Rates

Research question IV examined the relationship between participation in a student success seminar and community college graduation. Chi-square analysis was used to compare the rates of graduation for students who participated and did not participate in student success seminar at the end of two years, three years, and four years. Overall, there was a statistically significant relationship between participation in a student success seminar and graduating in two-years. Overall, 58/1520 or 4% of student who participated in student success seminar graduated in two-years compared to 13/652 or 2% of nonparticipants. However, the finding lacks any

generalizability given such a small N. There were no statistically significant relationships between participating in student success seminar and graduation at the end of the third or fourth-years of college. The review of literature is inconsistent as Sloan (1991) reported that participation in student success seminar was not related to community college graduation by the end of a three-year period. However, Barefoot (1993) and Stovall (1999) both report a significant association between participation in a student success seminar and graduating at the end of the third-year. There is currently no existing research regarding four year graduation rates.

Further analysis conducted for subgroups of students revealed a significant difference in graduation and the end of the second-year and participating in student success seminar for the following subgroups: Under 25 years of age, female, high school graduate, and planned to transfer. The subgroups: Over 25 years of age, male, white, African-American, 12 + credit hours/full-time, < 12 credit hours/Part-time, GED, Asian/Pacific Islander, Other ethnicity, Hispanic, and did not plan to transfer were not statistically significant. These findings conflict with Stovall (1999) who found no significant difference in the impact of participation on graduation at the end of the second or third-year according age, gender, ethnicity, initial enrollment status, high school performance, academic ability, declaration of program of study, or transfer intent.

In the current study, there was no significant difference found for subgroups of students participating in student success seminar and graduation at the end of the third or fourth-year compared to nonparticipants. This substantiates results by Stovall (1999) who also found no significant differences in the impact of participation on graduation at the end of the third-year according to age, gender, ethnicity, initial enrollment status, or placement levels on a basic skills

test. There is no existing literature regarding graduation at the end of the fourth-year for subgroups or an overall cohort.

Study Limitations

The findings of this study identified a statistically significant relationship between participation in student success seminar and persistence. However, due to the use of quantitative methodology, specifically the chi-square test, some of the statistically positive relationships between participation and persistence and graduation rates may be a weaker relationship as a result of smaller sample size. An example of what may be a weaker relationship but still statistically significant can be seen when looking at subgroups three and four-years out; sample sizes decline significantly. Additionally, chi-square does not give any information about the strength of the relationship, but rather conveying more of an existence or nonexistence of the relationships between the variables investigated. The findings of this research only indicate if a relationship exists between participating in student success seminar and academic performance, persistence, and graduation rates.

Another limitation of the current study is the narrow focus of factors considered, specifically demographic and institutional. As discussed earlier, research on the persistence of students in higher education has identified a wide variety of factors that influence the persistence of students in post-secondary education; (Bean & Metzner, 1985; Brooks-Leonard, 1991; Tinto, 1993) including socioeconomic status, SAT scores, family support, working full-time/Part-time, and academic performance in high school. This study focused on data that was available from the research site's existing database system. Due to the existence of a wide variety of variables affecting persistence, researchers may view the lack of some student characteristics in this research as a limitation. Lastly, given that this study is a single-case study, there is a limitation

in the ability to generalize the findings to other colleges. Researchers should consider conducting a study at more than one community college with similar characteristics (i.e., urban/rural, population size, demographics).

Conclusions and Implications for Practice

The content of the student success seminar included in this study corresponded to the major elements included in Tinto's (1975) model of student integration; Bean's (1980) model of student departure; Astin's (1984) student involvement theory, and Pascarella's (1985) general causal model. As such, the curriculum in student success seminar has been intentionally designed to consider the effect of student characteristics, institutional characteristics, social integration, academic integration, student satisfaction, and institutional commitment on student success. To facilitate integration, the student success seminar provided students increased interaction with faculty and peers including opportunities for open discussions on academic, career, and personal issues. The course included information about college resources and services so student could become more aware of support that was available outside of the classroom. The course's goals were aimed at improving students study skills needed for college success and guided them to accept more control of their learning and educational accomplishment.

Results of this study confirm the existence of a positive relationship between participation in a student success seminar and short-term academic performance and persistence. Student success seminar participants earned higher first-term grade point averages and had a higher rate of persisting to the second and third-term. Tinto (1993) suggested that the first six months of college are the most critical in determining whether or not a student will become integrated into the academic and social communities of the college. Students who leave college

prior to graduation are often those who fail to make the initial transition. Findings from the current study indicate that participation in student success seminar aided students in making the initial transition to college, which therefore lead to increased persistence.

In addition to the relationship between participation in a community college student success seminar and short-term academic performance and persistence, the study results indicate a significant relationship between participation in student success seminar and long-term persistence and graduation. In this study, students who participated in student success seminar had a higher rate of persistence to the second and third-year when compared to their peers who did not participate in student success seminar. Although the results of this study indicated a significantly positive relationship between participating in student success seminar and graduating at the end of the second-year compared to nonparticipants, the population was very small leading to a question of generalizability. The rates of graduating by the end of the third or fourth-years were similar for student success seminar participants and nonparticipants; no significant difference was found. This researcher hypothesized that the disparity between persistence rates and graduation rates may be the result of a population that would have persisted anyway. In other words, students that did not participate in student success seminar but still persisted at high rates may be the result of individuals that already possessed the intangible skillsets or characteristics to successfully persist. The fact that many more participants of student success seminar persisted in relation to nonparticipants may be the result of the course helping retain that many more students who otherwise may have dropped out. As an intervention, perhaps the greatest strength of the student success seminar is influencing persistence of students to a particular milestone (i.e., persistence to third-year) and from there additional interventions are needed to assist students actually graduating. Another hypothesis of

this researcher is that success of the student success seminar and/or institution should be correlated with transfer rates of students that otherwise do not earn a degree prior to transferring from the college?

The results of this study did not indicate a significant relationship between participation in a student success seminar and long-term academic performance. Student success seminar participants earned similar grade point averages and credit hours earned at the end of the first, second, third, and fourth years compared to nonparticipants. These results confirm that the positive impact of participation in a student success seminar on academic performance occurred early in the students' college enrollment.

The study explored the possibility that participation in student success seminar impacted the grade point average, credit hours earned, persistence, and graduation of students differently according to age, gender, ethnicity, high school experience, initial enrollment status, and degree intent. Results of analyses were inconsistent. For example, first-term grade point average was significantly higher for both student success seminar participants over 25 years of age and under 25 years of age compared to nonparticipants. However, participation in student success seminar had a greater impact on the second-term grade point averages of students who were under 25 years of age, male, Hispanic, enrolled in less than 12 credit hours, and earned a GED. Furthermore, an analysis of third-term and second-year grade point average revealed no effect for any of the 15 subgroups. Analyzing third-year grade point average, there was a statistically significant relationship for subgroups under 25 years of age, female, white, enrolled in more than 12 credits, high school graduate and plan to transfer. Lastly, there was only one subgroup that was statistically significant in participating and graduating at the end of the third-year: Did not

plan to transfer. There was no significance for any of the subgroups related to fourth-year graduation.

This study examined the relationships between participation in a mandatory mixed-format student success seminar and academic performance, persistence, and graduation at one public urban community college located in the Pacific Northwest. The sample consisted of all fall 2007, 2008, and 2009 students who were in their first-term in college and placed in developmental English. Students were tracked over a four-year period. The results of research conducted at this one community college cannot be assumed to be representative of all community colleges. When considering the relevance of the results, it is important to consider both the demographics of the students enrolled at a particular college and the content and delivery of the student success seminar. With these cautions in mind, the following implications for practice are presented.

1. Community colleges should seriously consider offering student success seminar as a required class for at-risk populations (i.e., developmental education). As the saying goes, "Students don't do optional" and upon giving the choice to students, many would elect out of enrolling in such a course; many that need the student success seminar intervention the most. Results of this study and others have confirmed the benefits to students when they enroll in student success seminar their first-term in college. Additionally, colleges that mandate such a course should ensure there are enough sections offered at various days/times in order to meet student needs. Lastly, in order to effectively impose a mandated class, college databases should have a mechanism to block student registration if a student has not already enrolled in student success seminar. Otherwise, students will eventually realize the mandate is a loose one and "slip through the cracks".

2. Community college advisors and/or counselors should be informed of the benefits of student success seminar as an opportunity to advertise the short and long-term benefits of such a course during new student orientation. Because most community colleges do not require but merely recommend student success seminar, it is essential that incoming students are advised of how the course will impact their success in college.

3. Community colleges that offer student success seminar, should consider how many credit hours to offer the course for. Given the extent of campus agendas and interests from various areas of the college, the amount of time to adequately cover course curriculum in any sort of depth can be a challenge and should be considered.

4. Community colleges should design the core of student success seminar curriculum in alignment with student development theory. Additionally, it is essential to the effectiveness of student success seminar that curriculum be systematized. In other words, design curriculum in accordance to the respective campus and its deadlines, advising and registration processes, campus policies, etc.

5. In the development of student success seminar curriculum, community colleges should strongly consider implementing a common curriculum as a way to assess student learning more uniformly. In addition, a common curriculum will allow for a more universal learning experience for students enrolled in any student success seminar. Lastly, training and class preparation for professors is much faster and more streamlined.

6. Community college administrators should ensure that student success seminar professors possess the needed expertise and dedication to teach such a course. Student success professors need to be empathetic and be able to work with the lack of preparation many first-year students, more specifically, developmental students arrive to the college with. Furthermore,

professors need to be provided professional development opportunities as well as adequate time for class preparation. Professors should also maintain a current awareness of campus activities and events that they can align with course curriculum. The benefits to student success as a result of out of class engagement with the campus community are highlighted in various student development theories (Astin, 1984; Pascarella, 1985; Tinto, 1975).

7. Individual community colleges should continuously assess the outcomes of their student success seminar. Such individual outcomes assessment will inform each college in their efforts to design and evolve a course that reflects the outcomes they would like achieved. A great normed instrument to assess curricular outcomes is the First-Year Initiative (FYI).

8. Colleges that require a student success seminar should consider developing a policy in the event a student fails student success seminar. In other words, should the class be repeated or not? There are valid rationales for allowing repeats as well as not allowing them. One rationale for allowing students to repeat could be that colleges allow students to repeat other courses. A reason for not allowing a repeat could be the timeliness as well as redundancy in information. Student success seminars are more effective and relevant when students enroll in them their first-term in college. Most students that enroll in student success seminar after their first-term have learned many things that would have been taught in student success seminar. In fact, most instances, students that enroll in student success seminar later in their academic journey purport how they wish they had the class their first-term in college.

9. Community colleges should consider making student success seminar a degree requirement. The advantages of doing so would be that students would view the course more as a requirement like any other course in their program of study instead of an additional course and

cost. Additionally, some student populations such as veterans would have an easier time getting approval of their educational plan.

Recommendations for Future Research

This study examined the relationships between participation in a community college student success seminar and short and long-term grade point average, credit hours earned, persistence, and graduation. Further research should be conducted to address the following:

1. More research is needed investigating the impact of a mandatory student success seminar in the community college on student success and graduation. This study may represent the first on a required student success seminar as past literature either identifies the student success seminar as a voluntary course or does not identify the requirement at all. The results of this study support the impact of student success seminar on persistence when compared to nonparticipants yet findings related to grade point average, credit hours earned and even graduation are more confounded.

2. This study did not account for the myriad of pedagogical approaches professors utilize in and out of the classroom. More research on teaching practices and strategies in a student success seminar may provide information that could assist in the design of professional development opportunities for professors; ultimately increasing the positive impact of student success seminar for students.

3. Research should examine the content of student success seminar to identify which characteristics of the student success seminar are most strongly associated with improved rates of persistence and student success. Porter and Swing (2006) attempted such study by surveying 20,000 students at 45 four-year colleges/universities and found study skills and health education to be related to early intentions to persist. Understanding which aspects of a student success

seminar have the greatest impact on persistence and graduation could inform course administrators and instructors about where to concentrate their efforts. There is currently no literature identifying the elements of a community college student success seminar that contribute to persistence and student success.

4. Future research should focus on students that failed to earn a certificate and/or degree or failed to meet their educational goal (i.e., transfer). In this study there was a positive impact of participating in student success seminar on persistence but persistence did not correlate to a significantly higher graduation rate. Future studies should interview or survey students that did not graduate. What were the key reasons for not completing their educational goal (e.g., economic, relationships, lack of preparation, etc.)?

5. As colleges move to increase educational access for distance learners, researchers should study the impacts of an online student success seminar on persistence and student success. The majority of research on student success seminars has been done on traditional in-class offerings.

6. A common learning objective in student success seminars is to familiarize students with campus support services. Further research should examine the extent that student success seminar participants utilize campus support services more than nonparticipants. A survey or interviews with these students could also provide data/information on the impact campus services have on student success.

7. Future research should target student success, persistence, graduation, etc. of students that participate in specific targeted sections of student success seminar. Some student success seminars are tailored for specific populations such as veterans, student-athletes, and for returning

adults (i.e., 30 years of age and older). Is there a greater benefit for certain populations of students when in class with a like peer group?

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Appendix A: Retention Savings Worksheet: Calculating the Dollar Value of Reducing Your First-to-Second-Year Dropout Rate

	Sample of Public Institution	Sample of Private Institution
I. Determine the number of students you are losing from first to second year.		
A. Enter the number of full-time, first-year students you enrolled	2,000	310
B. Enter your first-to-second-year dropout rate (express as a percentage)	.30	.37
C. Total number of students not returning (A x B) . . . . …. ..	600	115
II. Calculate the dollar value on average of retaining one full-time, first-year dropout to graduation.		
A. Enter your tuition (excluding room and board) . . . .$	3,000	$ 11,000
B. Enter your average annual per student/district appropriation (if any) . . . .$	5,000	$
C. Calculate your annual gross revenue per student (A + B)$	8,000	$ 11,000
D. Enter your average annual tuition discount (unfunded institutional financial aid) . . . . . .$	1,500	$ 2,970
E. Calculate your average annual net revenue per first-year student (C - D) . . . . . $	6,500	$ 8,030
F. Now calculate the value on average of retaining one full-time, first-year dropout to graduation:		
1. Enter your earnings for the freshman year (.25 x E) . .$ Assumes that, on average, you will gain some tuition revenue by saving a few freshmen who would have dropped out the first term and who instead continue enrollment (and pay tuition) for second or third term of the freshman year. Estimated tuition saved by additional term(s) of enrollment during freshman year = 25 percent.	1,625	$ 2,007

2. Enter your earnings for the sophomore year (.90 x E) Assumes 90 percent of the saved freshmen* will complete the sophomore year.	$	5,850	$	7,227
Two-year institutions, skip to G; four-year institutions, please continue.				
3. Enter your earnings for the junior year (.80 x E) . . . . . Assumes 80 percent of the saved freshmen will complete the junior year.	$	5,200	$	6,424
4. Enter your earnings for the senior year (.70 x E) . . . . Assumes 70 percent of the saved freshmen will complete the senior year.	$	4,550	$	5,621
G. Total net revenue on average gained by retaining one full-time, first-year dropout to graduation: (Two-year institutions, 1 + 2; four-year institutions, (1 + 2 + 3 + 4)	$	17,225	$	21,279

III. Calculate the dollar value of reducing your first-to-second-year dropout rate.

A. Enter the number of first-year students you are losing to attrition (I.C)		600		115
B. Enter the total net revenue gained by retaining one such student to graduation (II.G)	$	17,225	$	21,279
C. Total dollar value of reducing your first-to-second-year dropout rate by 10, 20, or 30 percent:				
10 percent reduction [(.10 3 A) 3 B]	$	1,033,500	$	244,709
20 percent reduction [(.20 3 A) 3 B]	$	2,067,000	$	489,417
30 percent reduction [(.30 3 A) 3 B]	$	3,100,500	$	734,126

*Saved freshmen refers only to that group of freshmen who were *prevented* from dropping out as freshmen.

Appendix B: Sample Student Success Seminar Syllabi

Sept. 22	Introductions/syllabus/classroom policies
Sept. 24	Ch. 1 College Culture
Sept. 29	Ch. 3 & 8 Time Management/Stress Management/Healthy Choices
	Ch. 1 Weekly Writing Activity Due
Oct. 1	Scavenger Hunt/Time Management Planner Due
Oct. 6	Educational Planning
	Ch. 3 & 8 Weekly Writing Activity Due
Oct. 8	Degree Audit/Educational Planning
Oct. 13	Ch. 4 Information Literacy/Educational Resiliency Reflection Due
Oct. 15	Library Tour
	Campus Event #1 Reflection Due
Oct. 20	Ch. 2 Goal Setting, Motivation, Learning Styles
	Quiz #1 Due
	Ch. 4 Weekly Writing Activity Due
Oct. 27	Career and Life Planning (meet in Career Center)
	Ch. 2 Weekly Writing Activity Due
Oct. 29	Resume' Development
	Educational Program Plan Due
Nov. 3	Ch. 6 Listening and Notetaking
Nov. 5	Ch. 9 Diversity and Relationships
Nov. 10	Ch. 7 Test Preparation & Test Performance/Ch. 6 Weekly Writing Activity Due
Nov. 12	Ch. 5 Learning, Memory, & Thinking/Ch. 9 Weekly Writing Activity Due
Nov. 17	Ethics/Ch. 7 Weekly Writing Activity Due
Nov. 19	Ch. 10 Prosper/Ch. 5 Weekly Writing Activity Due
Nov. 24	Guest Speaker?/Personal Code of Ethics Due
Dec. 1	Guest Speaker?/Quiz #2 Due/Ch. 10 Weekly Writing Activity Due
Dec. 3	Educational & Career Action Plan Project Due/Campus Event #2 Reflection Due