A Study to Determine Whether a Relationship Exists Between Attending a Public, Two-year Community College in the United States with or without Campus Housing and the Retention of First-year Students

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A STUDY TO DETERMINE WHETHER A RELATIONSHIP EXISTS BETWEEN ATTENDING A PUBLIC, TWO-YEAR COMMUNITY COLLEGE IN THE UNITED STATES WITH OR WITHOUT CAMPUS HOUSING AND THE RETENTION OF FIRST-YEAR STUDENTS

A dissertation submitted to
The Graduate College of
Marshall University

In partial fulfillment of
The requirements for the degree of
Doctor of Education

in
Leadership Studies

by
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Approved by
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Dr. Michael Gilbert

Marshall University
May 2013
DEDICATION

This dissertation is dedicated to my mother and father who provided never-ending support throughout my many years of undergraduate, master’s and doctoral work. Their constant encouragement, support, and belief in my capacity for academic achievement have propelled me through a lifetime of learning and taught me the importance of accomplishing my academic and life goals. They also taught me to never forget God in everything that I do. To my mother Colleen Portia Yaun-Hebert and father Johnnie F. Yaun, Jr. You both mean the world to me. I will never forget you. And to Don Hebert for his unswerving support and friendship.
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ABSTRACT

Student retention is a growing and common concern among community college administrators across the United States given the low retention rates at two-year institutions. With little change in the retention rates of first-year students at community colleges, administrators are searching for successful strategies and models within these heterogeneous educational environments to address the costs and consequences associated with low retention rates at two-year institutions.

The purpose of this study was to determine what relationship existed, if any, between attending a public, two-year community college in the United States with or without campus housing and the retention of first-year students. This study collected extant data from 2007 to 2011 from the Integrated Postsecondary Education Data System (IPEDS) on first-year student retention rates and other relevant student variables from 448 public, two-year community colleges in the United States and included such variables as age, gender, financial aid, graduation rates, race, and sex.

The results of this study indicated that the retention rates of community colleges with campus housing were lower than those without campus housing. Also, when compared with the other variables analyzed in this study, graduation rates consistently favored community colleges with on-campus housing, which supports other retention research.

Given the unique nature of both the community college student and environment, more data are needed in order to more effectively measure the practices, strategies, and student integration at public, two-year community colleges with campus housing in order to gain more insights into various facets of the community college experience and more closely analyze and
discover any possible relationship between living on campus and first-year student retention at public, two-year community colleges in the United States.
CHAPTER ONE: INTRODUCTION

The American Association of Community Colleges (2012) lists almost 1,200 community colleges as members serving more than 10 million students across the country with community college students constituting 44.5 percent of all undergraduate students in 2009 (“Community colleges,” 2011). The retention of students at community colleges is an ongoing and costly challenge facing community college administrators across the nation (Chen, 2010), and an issue that community colleges have recognized and studied for years (Schwartz, 2010). Both two and four-year institutions have experienced little change in retention rates (“Student Retention,” 2006). McClenney (2009) asserts that despite community colleges’ enrollment increases, a quarter of entering fall-term students do not return for the subsequent spring term. Almost half, on average, are gone by the second fall term, and fewer than half of community college students who aspire to earn associate or bachelor's degrees or transfer to four-year institutions achieve this goal. Nealy (2008) states that community colleges typically lose about half of their students prior to the students’ second college year as compared to about 27 percent at traditional four-year colleges and universities. Another report issued in 2012 listed the national first- to second- year retention rate for two-year community colleges at 55 percent (“National Collegiate,” 2012). Adams (2011) reported that 56 percent of first-year students returned to school after their freshman year.

Student retention is a major concern in higher education, and a growing number of public and private institutions are devoting more resources to helping students stay and thrive on their campuses (Waller & Tietjen-Smith, 2009). “Higher education institutions continually define and refine strategic initiatives to increase retention rates, often
devoting countless hours and resources with minimal results” (Waller & Tietjen-Smith, 2009, p. 1) with community colleges having some of the worst "success rates” in the nation (Rabe, 2011). Studying student retention and developing strategies to build it have been priorities of most community colleges for years as student retention initiatives are appearing with increasing frequency. Goldrick-Rab (2010) maintained that strategies are needed that are directed at multiple levels in affecting persistence. Effective strategies and solutions to boost college completion rates remain elusive (Spradlin, Burroughs, Rutkowski, Lang, & Hardesty, 2010), and the lack of research on community colleges is a serious problem when it comes to the study of retention (Bailey & Alfonso, 2005).

Several causes are attributed to the problem of low student retention rates that two-year community colleges are experiencing. Crockett (2011) lists “goal change or attainment, uncertainty of educational/career plan, extra-institutional factors, adjustment/transition difficulties, academic difficulty, and institutional fit” (p. 32). Brickman (2012) states that “community colleges across the nation struggle with the issue of student retention and persistence…many of the students attending community colleges are not prepared for college and face additional challenges such as inadequate financial resources and academic preparation, and family and job demands” (p. 1). Fike and Fike (2008) analyzed predictors of fall-to-fall retention for 9,200 first-time students in a community college and found such predictors of student retention as enrollment in a developmental education program and internet-based course, participating in a student support program, receiving financial aid, parents’ educational attainment, and the number of hours a student enrolls in during the first fall semester. They cite Lau (2003), McCabe (2000) and Higbee, Arendale, and Lundell (2005) who also support their suggestion that
enrollment in developmental education courses is positively associated with academic success and contingent on persistence. What Works in Student Retention, ACT’s 2010 survey of participating community colleges, found the following:

Retention, student satisfaction, and student success appear to improve when retention efforts are geared toward integrating the student’s total educational experience. Researchers also believe that variables related to educational goals may influence student retention. A significant association was found between student retention…and high school GPA, socioeconomic background, parental income…educational aspirations, and high school preparatory programs. The campus environment can also affect students’ decisions to stay in or drop out of school, particularly the developmental education of students. (p. 3)

Several reasons for the low retention rates in community colleges are listed, such as poor academic preparation, financial problems, family issues, childcare, transportation difficulties, and low socio-economic backgrounds. Burke, Goff, Ibrahim, and Lamont (2005) further elaborate on these difficulties:

They need to work, either part-time or full-time, to support their families in addition to attending class. Having a job can create extra stress in finding time to concentrate on studies often causing students to fall behind and receive poor grades that may eventually lead to attrition. Another contributing factor to attrition may be the open-door enrollment policy. This policy, often coupled with low tuition rates, allows the enrollment of relatively high level of ‘at-risk’ students, such as students from minority groups, students with disabilities,
students from low-income families, or first-generation students whose parents never attended college. (p. 2)

Karp, Hughes, and O’Gara (2008) state that, because of community colleges’ locations, open-admission policies, and low tuition costs, they tend to enroll students who are more academically and economically disadvantaged than do traditional four-year institutions. “Approximately one-fourth of community college students come from families earning below the federal poverty level and are more likely to take at least one remedial course than are their four-year college peers” (p. 2). Despite considerable efforts by community colleges to support student progress, community college students simply do not persist. According to McIntosh and Rouse (2009):

The difference in retention and completion rates between two- and four-year college students may be explained by multiple mechanisms, such as differences in characteristics between two- and four-year college students, differences in the cost of attending two- and four-year colleges and the availability of financial aid, and differences in the institutional environments across two- and four-year colleges. (p. 7)

Baker (2006) asserts that community college students “are more likely than ‘traditional’ students to attend college part time, commute to school, work, care for dependents, and be financially independent…that students have to work harder to achieve their academic goals, and colleges have to address significant challenges to retain and educate them” (p. 1). It is clear from the aforementioned literature that there is a large range of challenges and difficulties facing community college students today, and these difficulties have serious consequences for both students and two-year colleges alike.
Student retention is an important consideration for today’s community colleges for several reasons. First, student retention has become, for many institutions of higher learning, a measure of institutional effectiveness in today’s high accountability environment. Second, high retention rates can sustain academic programs and provide financial stability as low college completion rates cost two-year institutions significant amounts of dollars in unrealized tuition and fees, alumni contributions, and state and local government appropriations. According to Schneider and Yin (2011), during the academic years from 2004-05 and 2008-09, “state and local governments appropriated close to $3 billion to community colleges to help pay for the education of students who did not return for a second year, and, in total, almost $4 billion in federal, state, and local taxpayer monies in appropriations went to first-time, full-time community college students who dropped out” (p. 2). Third, the decision to leave college is frequently economically deleterious to college dropouts whose decision to leave places them in a position to earn much less over a lifetime of work (DeBerard, Spielmans, & Julka, 2004). It is projected that around 2013 the baby-boomer generation will be retiring, opening up approximately 80 million jobs, many of which require a college degree (“MSU Retains,” 2008). Fourth, many college students—especially dropouts—are burdened with debt from loans that could have been avoided or minimized by choosing other education or training options. Finally, to remain competitive in the global economy, a greater percentage of the college-age population must enroll in postsecondary education and complete a degree. According to Gore (2010), “postsecondary education is the key to a stronger workforce for a nation and a better quality of life. Better educated people clearly have a greater chance of obtaining secure jobs that provide opportunities for
advancement, pay higher wages, and offer greater health and retirement benefits than do those who are less educated” (p. 4).

Given the significance of student retention, a challenge facing community college educators and administrators in addressing these low retention rates is designing a retention model to fit these heterogeneous educational environments, which can be attributed to several causes. Community colleges were designed to be open-door institutions, and they enroll a much wider variety of students — minority, low income, low academic achievement, and first-generation — than baccalaureate-granting colleges. National data show that students with certain characteristics are at greater risk of leaving college before their second year. Those who drop out are disproportionately students of color, low-income students and academically underprepared students (Nealy, 2008). The typical community college student possesses characteristics different from those of traditional college students. For example, community college students are usually older, higher percentages of minority students are enrolled, and a higher proportion of students enroll in developmental education courses (Fike & Fike, 2008). Also, the findings from the 2010 Community College Survey of Student Engagement (CCSSE), developed to capture the experiences of two-year college students, found that community college students are likely to be working full-time, caring for dependents, academically underprepared, and lacking finances that could cause them to withdraw from college, and that these factors have an effect on student retention. Minority college students, another important part of the profile of community college student body, tend to be clustered more at community colleges and trade schools than at four-year colleges (Fry, 2010), and “warrant special attention in terms of understanding student retention” (Wild & Ebbers,
As mentioned earlier, models addressing student retention at community colleges with regard to student housing are few. “It is important that new research initiatives be undertaken that include models related specifically to community college student retention” (Wild & Ebbers, 2002, p. 504). As Tinto (2005) stated, there is a failure to translate the voluminous research findings on student retention into models that can guide institutional actions to enhance student retention.

Given the lack of research on community college housing, as Bailey & Alfonso (2005) state, “much of the thinking on retention has been based on concepts of student engagement and integration, concepts likely to be more powerful for residential campuses, who represent a small minority of the student population at community colleges, which are primarily commuter schools” (p. 8). The predominance of part-time students also differentiates community college students from traditional four-year institutions. Bailey and Alfonso state that “community college researchers and practitioners get little chance to discuss research findings in a way that would allow a more comprehensive understanding of the results and implications of existing research” (p. 9). Finally, in addition to the community college learning environment being less homogenous due to the different demands of work and family for its students, as well as the fact that community college students have differing goals, particularly as they relate to workplace skill development, Wild and Ebbers (2002) state that “it is difficult to generalize the definitions and measures developed for student retention in traditional universities to community colleges” (p. 504). Because of the characteristics that differentiate community college students from traditional college students — age, ethnicity, educational goals, parental education levels, financial aid received, enrollment
in remedial education courses, semester hours enrolled — it cannot be assumed that the current retention models used in traditional, four-year institutions will be effective at identifying community college retention strategies and solutions.

A number of theories exist regarding student retention that deserve mentioning. However, as Wild and Ebbers (2002) state, “the second issue in community college student retention is the theoretical models commonly referenced for student retention. These models have consistently provided the basis for study and discussion of student retention. Again, the scholarly efforts are primarily in the university context” (p. 506). These theories (Astin, 1993; Metzner & Bean, 1987; Spady, 1970; Tinto, 1993) attempt to describe the reasons for student attrition. However, one in particular is relevant to this research. The retention model most commonly used and cited in student retention research is Tinto’s (1975, 1993) student integration model, which states that students’ progress through stages as they make the transition from being a first time college student to being a mature student, and that these stages are influenced by academic and social integration, which both lead to the student’s decision to remain in or leave college (Fike and Fike, 2008). Students who withdraw from college have failed to successfully integrate either academically or socially in a college environment (Arnold, 1999). Tinto (1993) found that older students were more likely to drop out and the typical adult learner is more likely to be married, live off campus, and more likely to encounter greater problems in finding adequate time to study and interact on campus.

As much research underscores the importance of social integration during college as a determinant of persistence, “consequently, a substantial body of evidence has also focused on the influence of living on campus on the same outcome” (Schroeder, Mable,
1994, p. 26). Schroeder et al. also state that “the weight of evidence is clear, if not unequivocal that students who live in residence halls consistently persist and graduate at significantly higher rates than students who have not had this experience. The evidence shows that living in campus residence halls has its strongest positive influence in the areas of social involvement” (p. 27). Pascarella and Terenzini (2005) also state that evidence shows that students living in on-campus housing are more likely to persist than students who commute. “Residence halls have the capacity to facilitate students’ social (and perhaps academic) involvement with other students, faculty members, and the institution…and evidence here and elsewhere indicates that these involvements have a positive influence on persistence” (p. 421). This research supports and affirms Tinto’s conclusions about the importance of academic and social integration of the student. However, the aforementioned literature and research was conducted primarily at traditional, four-year institutions and, thus, limiting the generalizability of this model to two-year institutions.

The applicability of Tinto’s model to two-year community colleges, however, remains questionable. Fike and Fike (2008) state that community college students have unique characteristics when compared to traditional university students, and the specific impact of these characteristics on community college retention needs to be further assessed. By nature of their attendance patterns — most are older and live off campus, are from low income families, attend part-time, work full-time, and are academically underprepared — community college students are assumed to not have the time to participate in student activities and organizations that would facilitate social integration, a concept important for understanding the experiences of first-year, first-time community
college students. “Tinto’s theory is based on research regarding student retention in traditional university settings” (Wild & Ebbers, 2002, p. 504). Straus and Volkwein (2004) compared two- and four-year institutions and found “the social integration measure is an even stronger prediction of institutional commitment for students at four-year institutions than for students at two-year institutions” (Wilson, 2010, p. 217). Karp, Hughes, and O’Gara et al. (2008), however, state that “Tinto’s integration framework is often assumed to be inapplicable to the study of student persistence at community colleges because one of the linchpins of the framework - social integration - is considered unlikely to occur within community colleges” (Abstract). Their research found that both academic and social integration, contrary to findings from other studies that apply Tinto’s framework, are forms of integration that develop in concert for community college students” (p. 20). Several researchers, however, have confirmed Tinto’s conclusions regarding the importance of the academic and social integration of students, including Burke et al. (2005), Karp, Hughes, and O’Gara et al. (2008), and Pascarella (1980). However, Bailey and Alfonso (2005) state that “research on social engagement by community college students is mixed at best” (p. 13).

Designing research to document retention is a challenge for researchers. Given the low retention rates at most community colleges, as well as the limited amount of research on the effects of on-campus housing on first-year student retention at community colleges, a paradigm shift must occur within community college retention research, discussions, and literature. Research must be undertaken to identify relevant and meaningful models of student retention research and retention indicators that are unique to public, two year community colleges, as well as begin to assess the relationship
between on-campus housing and student retention, a factor that has received little to no attention in community college retention research.

**Statement of the Problem**

Low student retention and persistence rates at community colleges in the United States have plagued two-year institutions for years as the median first-to second-year retention rate reported by community colleges is 56% (ACT, 2010). With little change in community college retention rates over the past twenty years, community college educators and administrators need to be fully aware of the educational and economic costs associated with low retention rates to both students and community colleges as a whole. A review of the literature found just three relevant studies of campus housing at American community colleges (Moeck, Hardy, & Katsinas, 2006). Baker (2006) states that “there is limited research in the area of community college residence halls, and additional studies would be beneficial to help understand the dynamics of this particular population. Community college housing is a rather new phenomenon; consequently there is limited research to determine the impact on a community college student’s success to integrate in the residence hall community and persist in the halls” (p. 2). Research (Astin, 1993; Boyer, 1987; Kinzie & Kuh, 2004; Kuh, Kinzie, Schuh, & Whitt, 2005; Tinto, 1987) suggests that first-year students who are academically and socially engaged are more likely to succeed and persist than their peers who are not connected or engaged (Nayor, 2009) although this research is primarily based on traditional, four-year institutions. Little attention has been paid to exploring whether a relationship exists between living on campus and first-year student retention at public, two-year community
colleges in the United States. The purpose of this study is to determine whether that relationship exists.

Although voluminous literature exists on student retention at four-year colleges as well as some retention studies at two-year institutions, there is virtually no data that examines whether a relationship exists between living in on-campus housing and first-year student retention at public, two-year community colleges. Moeck, Hardy, and Katsinas (2006) note that “studies about the retention rates of students living on campus at public, two-year community colleges is limited at best as the literature is almost exclusively related to on-campus housing at four-year institutions…and this population has not been studied in what could be considered to be an extensive or meaningful way” (p. 78). Community college educators and administrators need to be fully aware of the educational benefits and outcomes that on-campus housing brings to the institution, as well as any aspects of the college living environment that relate to first-year student retention.

This study examined any possible relationship between attending a public, two-year community college in the United States with or without campus housing and the retention of first-year students. To date, no such research exists. This research may benefit community college educators and administrators in addressing the important issues associated with low retention rates that community colleges have been experiencing.

**Purpose of Study**

The purpose of this study was to determine what relationship existed, if any, between attending a public, two-year community college in the United States with or without campus housing and the retention of first-year students. This study utilized a
national approach by collecting extant data on the retention rates and other student characteristics from 224 public, two-year community colleges in the United States with on-campus housing and 224 public, two-year community colleges in the United States without on-campus housing in order to evaluate whether a relationship existed between living on campus and student retention. The results of this study provided data and information about what relationship existed, if any, between attending a public, two-year community college in the United States with or without campus housing and the retention of first-year students, as well as an understanding of any aspects of the community college experience that might have contributed to student retention. This study may also shed new light on the actions of community college housing by examining different student characteristics and relationships that may affect first-year student retention.

**Research Questions**

The primary purpose of this research was to explore what relationship existed, if any, between attending a public, two-year community college in the United States with or without campus housing and the retention of first-year students. In order to study this issue, the following research questions were addressed:

1. What relationship exists, if any, between attending a public, two-year community college in the United States with or without campus housing and the retention of first-year students?

2. What relationship exists, if any, between age of first-year students attending a public, two-year community college in the United States with or without campus housing and student retention?
3. What relationship exists, if any, between the financial aid received by first-year students attending a public, two-year community college in the United States with or without campus housing and student retention?

4. What relationship exists, if any, between the race of first-year students attending a public, two-year community college in the United States with or without campus housing and student retention?

5. What relationship exists, if any, between the sex of first-year students attending a public, two-year community college in the United States with or without campus housing and student retention?

6. What relationship exists, if any, between the graduation rates of first-year students attending a public, two-year community college in the United States with or without campus housing and student retention?

Significance of the Study

This study bears significance for several reasons. First, the current community college retention rates of first-time, first year students are dismal at best, and community college leaders are being asked to identify and develop appropriate indicators of student retention as well as retention models that are more suited to the community college environment. Pascarella (1999) contends that “we cannot afford to continue to operate in ignorance of the educational influence of a set of nearly 1,200 postsecondary institutions that educate almost 40% of our students” (p. 13). As student retention is an ever-increasing consideration for community colleges today, these institutions need to be concerned about why students are leaving college (Fike & Fike, 2008). Community colleges must identify criteria for tracking student retention, including definitions of
student retention indicators. Second, despite the large number of entering students who enroll in community colleges each year, too few research studies have been completed on the community college environment with regard to student retention. As Wild & Ebbers (2002) state, “to have such a small proportion of retention studies focused on community college students is unfortunate. Given the variations and nuances of the community college environment and its students, a more comprehensive understanding of how student retention is defined and measured is needed” (p. 504). The Integrated Postsecondary Education Data System (IPEDS) includes data on more than 1,000 community colleges, but has little detail on the types of institutional practices colleges use to improve retention (Bailey & Alfonso, 2005). Third, accrediting bodies, state legislatures, the federal government, and the public at large are pressuring community colleges to be accountable for the retention and graduation rates of their students (Schwartz, 2010). Fourth, the idea of a possible relationship between living on campus and student retention has received almost no attention in prior research, as the majority of research related to retention has focused on institutional practices at a single community college location or on the characteristics of students attending community colleges. Student housing and its possible effects on student retention needs to become a more prominent part of community college retention research and discussions in order to study this population and issue in a more purposeful way; this is where the gap in the research exists. Finally, the development of strategies and models to create positive retention at community colleges will likely offset or alleviate the consequences of low college completion rates — unrealized tuition and fees, student dropouts earning less over a lifetime, and the lack of ability of college dropouts to obtain and secure jobs that provide
opportunities for advancement and higher wages. According to Schwartz (2010), the persistence rates of community college students are not currently sufficient to meet the goals of the American Graduation Initiative, the Obama administration’s plan to help revitalize the economy. President Obama stated that “jobs requiring at least an associate’s degree will grow twice as fast as those requiring no college education over the next decade” (Superville, 2009). In order for the number of graduates to increase, the rate of student persistence will need to increase as well. Given these issues, student retention is critical to the success not only of students themselves, but to higher education as a whole and to the national economy.

Methods

This study was designed to determine what relationship existed, if any, between attending a public, two-year community college in the United States with or without campus housing and the retention of first-year students. In order to identify the first-year student retention rates and other student characteristics, extant data from 2007 to 2011 was collected from the IPEDS database on 224 public, two-year community colleges in the United States with on-campus housing and 224 public, two-year community colleges without on-campus housing. The 224 without on-campus housing were randomly selected from a group of 857 public, two-year community colleges in the United States identified through IPEDS. Student characteristics that were considered in determining their potential effect on first-year student retention included undergraduate student age; financial aid received; graduation rates; race; and sex.

In order to analyze the collected data, a t-test was used to examine the mean differences of two groups of community colleges, one with campus housing and the other
without campus housing. Given the data collected will consist of parametric data, statistical differences in observed or expected outcomes will be determined. The data yielded themes and trends related to the purpose of this research study. Through the data analysis and collection, an understanding of any possible relationship, if any, between attending a public, two-year community college in the United States with or without campus housing and the retention of first-year students emerged.

**Limitations of the Study**

The research design included limitations and factors beyond the researcher’s control that could affect how the results of this study were interpreted. The study was limited by the sole reliance on IPEDS data as opposed to direct observations or surveyed responses of institutional practices and students. As most of the primary research theories on student retention discuss the importance of academic and social integration measures, this type of data was unable to be obtained through IPEDS. As Bailey and Alfonso (2005) state, “IPEDS includes data on over 1,000 community colleges but has little detail on the types of institutional practices colleges use to improve retention” (p. 8). Finally, the results may not be generalizable to the overall population of private and tribal community colleges with campus housing, which represent only 13% of the total community colleges in the United States (American Association of Community Colleges (2012).

**Delimitations of the Study**

There were several delimitations of this study. The American Association of Community Colleges (AACC) lists almost 1,132 total community colleges in the United States. Only 224, or 21%, of the 1,081 public, two-year community colleges identified through the IPEDS database search were found to have on-campus. These represent only
a small portion of the total public, two-year community colleges in the United States. Of
the group of 857 public, two-year community colleges without on-campus housing that
were identified, 224 were randomly selected to serve as a group for comparison with
regard to first-year student retention rates and the student characteristics that will be used
in this study. Also, public, two-year community colleges were selected for analysis and
comparison in this study because they represent the majority, or 91 percent, of
community colleges in the United States, with independent and tribal community colleges
representing just 13 percent (AACC, 2012). The research problem selected was chosen
to determine whether a relationship existed between living on campus and first-year
student retention at public, two-year community colleges in the United States, and did not
include other aspects of the community college environment or experience that might
affect first-year student retention. Finally, the significance of this study may be limited by
focusing on the entire population of public, two-year community colleges with on-
campus housing, and the results may not be generalizable.

**Operational Definitions**

For the purpose of this study, the following terms were defined:

1. American Association of Community Colleges (AACC) — representing nearly
   1,200 two-year, associate degree-granting institutions and more than 13 million
   students, AACC is the primary advocacy organization for community colleges at
   the national level and works closely with directors of state offices to inform and
   affect state policy.

2. AA degree — an Associate of Arts (AA) degree is received after completion of a
two-year full-time curriculum from a community college. The AA curriculum is
usually general, covering the social sciences or humanities and is intended to prepare students to transfer to bachelor's degree programs in a wide variety of fields. The AA degree corresponds to the first two years of a four-year baccalaureate degree program.

3. Community College — community colleges in this research will be defined as public, two-year educational institutions providing post-secondary education, granting associate's (AA) degrees and offering certificate programs, professional technical programs, and transfer programs.

4. Integrated Postsecondary Education Data System (IPEDS) — the primary source of data on college, university, technical schools, and postsecondary institutions in the United States. It is a system of interrelated surveys conducted annually by the U.S. Department’s National Center for Education Statistics (NCES). IPEDS gathers information from every college, university, and technical and vocational institution that participates in the federal student financial aid programs. The Higher Education Act of 1965, as amended, requires that institutions that participate in federal student aid programs report data on enrollments, program completions, graduation rates, faculty and staff, finances, institutional prices, and student financial aid.

5. On-campus housing — housing provided for degree-seeking students by the institution on a public, two-year community college campus.

6. Public institutions — a community college identified by IPEDs and the United States Department of Education as being publicly owned.
7. Retention — defined in this study as the continued enrollment of degree-seeking students from first fall semester of the first year of college to the next Fall semester of college.

**Organization of the Study**

Chapter One of this research study introduces the problem, the research questions, the purpose, the significance of this study, definitions, and the research method. Chapter Two contains a background and history of community colleges, the issue of community college retention, a discussion of the community college student and environment, a discussion of housing, the origins of collecting retention data, and a review of the literature and research relevant to the problem of this study. Chapter Three contains the methods and procedures used in the collection and analysis of data for this study. Chapter Four includes the data analysis and results conducted in this research. Chapter Five is devoted to a summary of the findings, conclusions, implications for practice, and recommendations for future research.
CHAPTER TWO: REVIEW OF THE LITERATURE

Introduction

Community college students represent a growing and important part of postsecondary education, and enrollments continue to climb despite the effects of the recent 2008 recession, yet the literature on the effects of these institutions on student development and retention is minimal compared to that of traditional, four-year institutions. Pascarella (1997) discusses how little we know about community colleges, despite the huge role they play in American higher education. Community colleges are “often regarded as a catch-basin for those few students unable or unwilling to enter ‘regular colleges’” (p. 15). Pascarella goes on to discuss how the dominant view of both the higher education establishment and the public at large is that community colleges form a “peripheral part of the collegiate system, a catch basin for those few students unable or unwilling to enter ‘regular’ colleges” (p. 4). Wild and Ebbers (2002) discuss how some early research exists on community colleges and student retention; however, a much more thorough understanding and integration of all theories of retention with regards to community college students is needed. And McIntosh and Rouse (2009) state how “two-year colleges have long been the stepchildren of the higher education family of institutions, despite the fact that they are the main contact with higher education for a large proportion of young people” (p. 20). In his 1991 study with Patrick Terenzini, How College Affects Students, Pascarella states how “we realized it was almost totally skewed in the direction of students in four-year colleges and universities, despite the fact that over a third of college students are enrolled in community colleges” (p. 15). The nature of community college students as well as their characteristics and enrollment patterns
makes the study of the impact of community colleges on students both challenging and difficult.

This study is primarily concerned with the effects of on-campus housing on first-year student retention rates at public, two-year community colleges in the United States, as well as any relationship between living on campus and student retention with regard to age, financial aid, graduation rates, race, and sex. Given the growing body of literature about the impact of community colleges upon student learning and development, as well as the increase in the number of two-year campuses offering campus housing to their students, the literature about any relationship between living on a community college campus and first-year student retention remains elusive at best. Studies of traditional, four-year institutions (Pascarella & Terenzini, 2005; Astin, 1999) have shown a direct correlation between living on campus and increased student retention rates. Given the low retention rates of first-year students at two-year institutions and the relative lack of information on community college retention models, especially as it relates to living on campus, the nature and purpose of this research becomes even more relevant. The retention of students at community colleges is an ongoing and costly challenge facing community college administrators across the nation (Chen, 2011), and has become an important consideration for today’s community colleges for several reasons, which will be discussed later. Despite community colleges’ enrollment increases, a quarter of entering fall-term students do not return for the subsequent spring term. Almost half, on average, are gone by the second fall term, and fewer than half of community-college students who aspire to earn associate or bachelor's degrees or transfer to four-year institutions actually do so (McClenney, 2009). A recent study by Habley, Bloom, and
Robbins (2012) puts the retention rate of public, two-year community colleges at 55.4%. McClenney also states that the most significant educational challenge for community colleges is providing remedial education for the large numbers of students who are underprepared, citing data from “Achieving the Dream: Community Colleges Count,” which indicates that more than 250,000 students, many of whom were assessed as needing remedial classes, never made it to college-level courses.

This chapter begins with a discussion of the background and evolution of community colleges in the United States. Next, a discussion is presented about the overall purpose and goals of community colleges including types of programs offered, traits of community college students, and the community college curriculum. A discussion of the unique problem of student retention/persistence that faces most public community colleges in the United States today follows. The origins of housing on community college campuses and reasoning for building housing on these campuses are then discussed. Finally, a review of the relevant literature with regard to student retention studies related to public community colleges follows, as well as a review of the literature related to the effects of on-campus housing on student retention.

The Origins and Evolution of Community Colleges

The community college is a “distinctively American institution” (Boggs, 2010) and a creation of twentieth century higher education. The first community colleges date back as far as 1862. The term “community college” originated in 1946 with President Harry S Truman’s Commission on Higher Education, which released a report in December of 1947 emphasizing equal educational opportunities for all aspiring college students regardless of economic limitations. Shortly afterward, the term “community college”
became popularized and began to refer to all two year academic institutions (Shaner, 2012). Before there were community colleges as we know them today, their predecessors were the junior colleges and normal schools of the nineteenth and early twentieth centuries. During the 1880s normal schools were created as a form of alternative secondary education for those students who wished to teach as a profession. As states adopted compulsory secondary education laws and teacher certification standards, the demand for qualified teachers grew. Many of the first two-year colleges were primarily institutes, such as the Lewis Institute, established in 1896, and the Bradley Polytechnic Institute established in 1897. According to Ratcliffe (2002):

The vocational education movement of the late nineteenth century, the emphasis on technical education during the years of the Great Depression and World War II, the career education initiatives of the 1970s and 1980s, and contemporary workforce-development programs of states and the federal government have insured that vocational, technical, pre-professional, and para-professional programs are mainstays of the community college. (p. 1)

Although the roots of this uniquely American contribution to higher education extend to several specialized two-year institutions that began in the late 19th century, most community college historians point to the founding of Joliet Junior College, in Illinois, in 1901 as the true beginning of the American community college movement. It is the oldest community college still in operation. William Rainey Harper, the president of the University of Chicago, and J. Stanley Brown, the principal of Joliet High School at the time, collaborated to found Joliet Junior College in order to expand educational opportunity and to prepare the very best students for the senior college at the University.
Harper's idea when forming Joliet Junior College was to provide another educational opportunity for the overwhelming number of soon-to-be college freshmen. According to the American Association of Community Colleges (2012):

The American liberal arts college provided inadequate rigor and quality, thinking their programs akin to the German gymnasium (or high school) rather than true university-grade work. He [Harper] isolated and strengthened the first two years of undergraduate study in an organizational unit of the university labeled The Junior College. Further, he urged denominational colleges in the area to reduce their curriculum to two years and send their students on to the university, indicating that formal arrangements could be made for the acceptance of their students' work toward the baccalaureate degree. He also advocated that high schools extend their curriculum to include the first two years of college.

Many students who wanted to continue studies after high school were not qualified to gain entrance into a traditional four-year institution. Community colleges would also provide students with the liberal arts curricula that could assist them with transferring into a four-year institution. In 1901, there were about nine two-year junior colleges across the United States (“The Evolution,” 2012).

After Joliet Junior College was established, junior colleges began to grow rapidly in the United States. “By 1920, over 200 junior colleges were established throughout the United States” (Catt, 1998, p. 7). The large influx of immigrants into the United States during the first two decades of the twentieth century also fueled the growth of community colleges. The suffrage movement increased enrollment as well. “In 1920, less than 4% of the American population went to college. By the end of the 1920s, 12% of high school
graduates were attending college” (“Community Colleges,” 2012). National associations were founded around the role of the junior college. In 1920, the American Association of Community Colleges (AACC) was formed as a way to organize the various institutions throughout the nation. In 1921, the American Association of Junior Colleges (AAJC) was created which provided a forum for the large number of emerging institutions, including high schools providing two-year collegiate programs, women's colleges, military institutes, private junior colleges, and technical institutes. By 1930 community colleges existed in all but five states.

Between 1930 and 1970, enrollments grew exponentially at junior colleges. During the Great Depression in the 1930s, community colleges began offering job-training programs to ease widespread unemployment. After World War II, the conversion of military industries to create consumer goods created skilled jobs. This economic transformation, along with the GI Bill, created the drive for more higher education options. Programs and services for adults, for the continuing education of workers in the skilled trades, technical occupations, and courses and programs of value to personal and corporate development in the local community became distinguishing features of community and junior colleges across the United States. After World War II, this function grew in prominence as community colleges were looked upon to provide educational services to the entire local community and not just traditional college-age groups. From this perspective, the role of service to the surrounding community has become fundamental to the definition of the public community college mission. In 1948, the Truman Commission suggested the creation of a network of public, community-based colleges to serve local needs. During the 1950s, more community colleges started
receiving public funding, which contributed to the establishment of various state community colleges as public educational institutions. Community colleges became a national network of institutions in the 1960s with 457 public community colleges opening during that time, more than the total in existence before that decade. Providing credit and noncredit courses and nonacademic educational services to the area served became a priority for community colleges in the 1970s and 1980s.

The decade of the 1980s saw enrollment growth and the expansion of community college programs. Large waves of immigration propelled the expansion of community college programs to new segments of the population, as these programs were needed in order to meet the needs of immigrant students with little formal education. “Throughout the 1980s, community colleges also expanded to provide continuing education programs and services for adults, including education for skilled trades, technical occupations, and allied professions, as well as courses for both personal and corporate development” (“The Evolution,” 2012). The 1980s and 1990s witnessed efforts to reform education as lawmakers in various states proposed that community colleges help to prepare qualified teachers and provide them with continuing education and professional development. The American Association of Community and Junior Colleges, formerly the AAJC, and now known as the American Association of Community Colleges (AACC), advocated that community colleges work with area high schools to develop new, intensive, technical-education programs. These programs consisted of two years of science and technology preparatory work in a high school, followed by specialized technical training in the community college. The American Association for Higher Education (AAHE) promoted the creation of two-year and four-year college partnerships with high schools to
strengthen the continuity of curriculum and students between the cultures of secondary and higher education.

The past one hundred years has witnessed tremendous growth in community colleges in numbers and educational options, and they have been able to change with the times. No other segment of higher education is more responsive to the local community and workforce needs. “From relatively modest beginnings at the turn of the 20th century, community colleges now enroll close to half of all U.S. undergraduates” (“Students At,” 2012). Community colleges educate more than half the nation's undergraduates...Since 1901 at least 100 million people have attended community colleges” (“Community Colleges,” 2012). According to Boggs (2010):

Community colleges provide access to higher education to the most diverse student body in history: age, ethnicity, nationality, socioeconomic status, and degree of disability. Forty-seven percent of first-generation college students, 53% of Hispanic students, 45% of Black students, 52% of Native American students, and 45% of Asian/Pacific Islander students attend community colleges. Although the average age of community college students is 28, 46% of them are age 21 or younger. (p. 3)

Although many countries possess binary higher education systems accessible only to individuals with exceptional performance on government-sponsored examinations, the American postsecondary education system has remained committed to developing educational programs dedicated to the needs and expectations of its society. “Especially in times of economic uncertainty, community colleges provide an affordable option to both recent high school graduates and returning adult learners” (Boggs, 2010, p. 2).
Originally developed as open-admissions junior colleges offering the first two years of a baccalaureate education, community colleges have evolved into comprehensive institutions serving the postsecondary educational needs of communities and preparing students to transfer to traditional universities or to enter the workforce directly.

Though community colleges have a distinct educational mission, they also have many shared practices in common with one another, such as open access and admissions. For the most part, community colleges offer admission to all who possess a high school education, in addition to providing assistance to adults in completing their secondary education. Community colleges have provided educational programs and services to people who otherwise would not have enrolled in a college or university. They also attract students who live in geographic proximity and who seek low-cost postsecondary education (“Community Colleges,” 2012). Community colleges expanded the scope of higher-education offerings by adding to the curriculum courses of study that meet the educational needs of an advanced and technological society by offering to such groups as displaced homemakers, students with disabilities, those needing adult basic education, and the unemployed seeking job retraining. Such additions have broadened their overall curricula and provided access to college for those who otherwise could not afford it.

**Purpose**

The basic role and function of the community college is to create centers of educational opportunity that welcome all students who desire to learn, regardless of wealth, heritage, or previous academic experience. The distinct contribution of community colleges to American higher education is the adaptive nature of their mission. According to Vaughan (2006):
The community college’s mission is the fountain from which all of its activities flow. In simplest terms, the mission of the community college is to provide education for individuals, many of whom are adults, in its service region. Most community college missions have basic commitments to: serve all segments of society through an open-access admissions policy that offers equal and fair treatment to all students; provide a comprehensive educational program; serve its community as a community-based institution of higher education; and provide lifelong learning. (p. 8)

They represent education’s local, front-line connection with society. “To fulfill this mission, community colleges provide general and liberal education; vocational and technical education; adult and continuing education; and remedial, and college-preparatory education…these functions have grown to predominate in response to local needs and expectations” (Ratcliffe, 2002, p. 1).

A comprehensive community college incorporates an eclectic set of educational philosophies and purposes into its mission. It’s most dominant and historical feature is its intimate relationship to the life of the community it serves. The contemporary and prevalent view of the American community college is that of a local institution characterized by its connection to the surrounding community it serves. The evolution of this view from that of junior college or private preparatory college was sparked in 1947 by President Harry Truman’s President's Commission on Higher Education, which suggested the name “community college” be applied to this institution, which was designed to serve local community educational needs. Also significant in its development was the advocacy of the Carnegie Commission on Higher for the establishment of
community colleges within commuting distance of every adult. These commissions, together with the Higher Education Act of 1964, enabled community colleges to be rapidly established to meet the growing demand for higher education among the World War II generation and their children.

The mission of the community college, like that of other institutions, has evolved in relation to social context. The community, junior, or technical college was just one phase in the development of this particular institution, which was especially true of those with origins connected to educating teachers. As the profession matured, these institutions expanded their programs to broader fields of study, and even becoming baccalaureate-granting institutions. Many liberal arts colleges, comprehensive colleges, and doctorate-granting universities evolved from private junior colleges and technical institutes. California State University-Fresno, the University of Texas at El Paso, and the University of Southern Colorado all began as two-year colleges. When these institutions became baccalaureate-granting institutions, they adopted more selective admissions processes and broadened their curriculum, which left an educational vacuum due to the lack of open admissions, adult education, and two-year vocational and technical programs. The emergence of these urban regional universities did not alleviate the need for local community colleges, as public demand in these cities led to the establishment of new community colleges.

The past century has witnessed the transformation of the junior college into the community college. Community colleges promote educational opportunity and access to college and provide varied curricula and programs for students of all ages. In 2002 the Gates Foundation provided support for seventy small high schools to develop associate
degree programs, setting in motion changes similar to those in the 1920s and 1930s that brought about many new two-year colleges. As society changes, so will its institutions of higher learning (“Community Colleges,” 2012). These institutions provide their communities with a wide variety of curricular offerings, programs, and degrees in order to provide opportunities to all those seeking an education in order to gain the requisite skills and knowledge to compete in today’s advanced, technological society.

**Governance**

The nature of governance at the community college level is a patchwork of different models. According to Schuetz (1999), “governance in America's community colleges is virtually a state-by-state choice with some of the variations being: state vs. local, elected vs. appointed, state appointed vs. locally appointed, taxing authority vs. no taxing authority, voluntary shared governance vs. mandated shared governance, and various combinations thereof” (p. 1). State and local governance and coordination of community colleges vary from minimal state control to strong local governing boards. According to McCauley (2002):

> A community college that is fully-supported through state funds will operate like its public four-year counterpart, where members of the governing body are nominated to the position. Community college governing boards, like other public institutions, are also responsible to the guidelines or standards imposed by the state such as the department of education or educational commissions. Each institution still has some autonomy in its overall governance, which may distinguish it and lend its purpose to fulfill its ultimate responsibility to the institution's survival and ongoing continuance. Today's institutions see a need for
increased diversity on their governing boards, within the constraints of their by-laws, to allow for faculty, staff and student voices. (p. 2)

Two examples of today’s community college governance structures are illustrative. The governance structure of the California Community Colleges (CCC) system has a governance structure for the system’s 72 community college districts that consists of locally elected boards with members that serve four-year terms. Governance is shared by a 17-member Board of Governors appointed by the governor, which sets policy for the CCC system as a whole and appoints the CCC chancellor, who manages the system with board approval. Another example is the Miami-Dade Community College (MDCC) system, a multicampus, two-year, state-supported institution in the Miami area established in 1959. The college consists of six distinct campuses governed by a seven-member district board of trustees, appointed by the governor of Florida (“Community College,” 2012).

As community colleges in the United States have become visible and respected institutions of higher education, community college governance has changed from the prototype of its early predecessors. Gone are the days when university officials and trustees acted unilaterally; broad-based involvement in governance is now encouraged (Cloud and Kater, 2008). In today’s community college environment, the trend is toward shared responsibility and shared governance (Davis, 2012), as department heads, college presidents and elected officials are often the people responsible for governing a community college (Montoya, 2012). Governance structures are more collegial, flexible, and inclusive as community colleges evolve to meet the needs of an increasingly complex and diverse society (Cloud and Kater, 2008). Having evolved from traditional public
school bureaucratic and political models that emphasize control and oversight, community college governance is now a dynamic and shared process with a host of participants.

**The Community College Curricula**

Community colleges have evolved over their one hundred year history and continue to change based on the needs of their local communities. The curriculum is no different. According to Chen (2009):

Curriculum in the community college is based on a single premise: satisfying the learning needs of the community. It is rare for a community college to design curriculum to serve students beyond its regional boundaries, and so the many needs of the locality are the focus. “Their origins and development were based upon three concepts: college and university preparation; college degrees were seen as needed so cities and towns needed local institutions to provide inexpensive access to college; and with jobs having sophisticated technical requirements, a high school education was seen as insufficient for the workforce. (“Community College,” 2012)

Community colleges are now multipurpose institutions that offer students short-term continuing education, retraining, certificate and degree attainment, and post-baccalaureate credentialing (Scott, 2012), which translates into a curriculum based upon three general areas: transfer to four-year college; vocational and career technical; and workforce development. Some community colleges offer bachelor's degrees in select majors. As of May, 2009, only 14 community colleges nationwide have been authorized
to grant bachelor’s degrees, making bachelor’s degrees at community colleges still quite rare (“Community College,” 2012).

Given the effects of the recent recession in 2008, many community colleges are shifting away from their traditional curriculum by restructuring curricula to meet the needs of the local economy (Chen, 2009). For example, Michigan’s community colleges are changing their course offerings to retrain thousands of unemployed auto workers. According to Pusser and Levin (2009), community colleges have transformed their curriculum to meet today's economic demands:

Community colleges are tailoring their comprehensive educational programs into more specialized, technical pathways. For example, Stony Brook community college has a government subsidized project management program to help retrain unemployed individuals for the computer services industry. Metropolitan Community College (MCC), in Omaha, Nebraska, has established a two-year program catering to local area employment opportunities and real world working conditions. Maine’s community colleges are also quickly shifting their curriculum to embrace the current local economy. Instead of focusing on theoretical course offerings, these colleges have introduced more practical vocational programs and class options, certifications, and degrees. The Maine Community College System is now offering heavy-equipment operator training, a criminal justice program to its curriculum, and a new autism program has been added to address increased autism diagnosis in its community. These new course options specifically focus on alleviating Maine's employment struggles. (p. 2)
The community college is unique in the postsecondary arena due to its open access, being a gateway to four-year institutions, its contribution to the significant growth of U.S. postsecondary education, serving communities and groups that otherwise would not have access to postsecondary education, offering low tuition, and high-quality education and training designed to meet local community needs. With enrollments increasing, “a central question that needs to be addressed is whether the community college’s traditional range of functions, including community building, transfer, vocational education, and economic development, can be preserved because of the uncertainties of the current job market” (Pusser and Levin, 2009, p. 7).

The Twenty-First-Century Community College

The community college of today has not only survived but demonstrating remarkable resiliency in providing educational opportunities to all education seekers. The community college has evolved and adapted with the issues facing local communities. They are a unique component of the American higher education system providing a flexible, adaptive, and affordable form of higher education tailored to local community needs. The Obama Administration has pointed out that jobs requiring at least an associate degree are projected to grow twice as fast as those requiring no college experience. According to Boggs (2010):

In its report of the Springboard Project, the Business Roundtable echoed President Obama’s challenge to increase education attainment levels to build a competitive workforce. The report recommends unlocking the value of community colleges, stating that these institutions have the potential to play a dominant role in
strengthening local economies. In order to accomplish these goals, community college student completion rates must improve. (p. 4)

It has now been over a century in which community colleges have helped millions of people learn and advance toward personal goals, while providing a venue to address challenges facing entire communities. Community colleges help an industrialized society such as the United States have a full range of education and training depending on the demands and needs of society and the workplace. These adaptive, flexible, and accessible characteristics are what give community colleges their unique and singularly important role in American society. Community colleges play a unique and essential role in preparing the nation’s workforce and become the institutions of choice for millions of Americans.

One facet of community colleges that has received increased attention in the media and within higher education as of late is around student success and retention. “Too many students do not make it successfully through remedial programs into college-level courses, and too many do not complete their programs because of insufficient financial support or poor institutional or state policies and practices” (Boggs, 2010, p. 2). Significant efforts have been made by the Gates and Lumina Foundations to improve student completion rates in community colleges. The launch of Achieving the Dream: Community Colleges Count initiative (ATD), a national initiative aimed at helping more community college students succeed, especially students of color, working adults, and students from low-income families, includes institution-level support at selected community colleges. Participating colleges identify strategies to help more students continue their studies in order to earn their degree or certificate. Ultimately, Lumina’s
goal is to increase the proportion of Americans with high-quality degrees and credentials to 60% by the year 2025 (“The Big Goal,” 2012). In April 2010, six national community college organizations signed a call to action to matching President Obama’s 2020 goal. These organizations are seeking to develop cohesive strategies to address the perennial issue of low student retention that is affecting most community colleges in the United States.

**Student Retention/Persistence**

The problem of student retention is not unique to community colleges. According to a report in 2010, *What Works in Student Retention*, released by American Collegiate Testing, the median first-year to second-year retention rate reported by community colleges in 2010 was 56% as compared to 73% at traditional four-year institutions. According to ACT (2012), these rates remained virtually unchanged two years later. The retention of students at community colleges is an ongoing and costly challenge facing community college administrators across the nation (Chen, 2010), and an issue recognized and studied for years (Schwartz, 2010). This gap between two-year and four-year retention rates is something community college administrators have attempted to resolve over the past few decades with little success.

Low student retention and persistence also rates have severe and negative consequences for the institution and for its students. For these reasons, strategies are needed that are directed at all levels of community college institutions in affecting student persistence at community colleges (Goldrick-Rab, 2010). Wild and Ebbers (2002) state that because of the characteristics of community college students — age, ethnicity, educational goals, financial aid received, enrollment in remedial education
courses — it cannot be assumed that the current retention models developed for four-year institutions would be useful or effective in studying community college retention (p. 504). "The dominant theoretical perspectives on retention were developed primarily on four-year college models with a particular emphasis on full-time traditional aged college students, and that empirical tests of these models has not yielded strong support for their application to community colleges” (Bailey and Alfonso, 2005, p. 2). Given these issues, a challenge facing community college educators is designing a retention model to fit these heterogeneous educational environments. Bailey and Alfonso (2005) also describe the challenges of such environments being open-door institutions and enrolling a much wider variety of students — minority, low income, low academic achievement — than baccalaureate-granting colleges. Those who drop out are disproportionately students of color, low-income students, and academically underprepared students.

The issue of low student retention rates needs to be further addressed and analyzed because of the consequences for community colleges as a whole. Low retention rates affect the institutions’ financial stability, which can lead to cuts in academic programs and student services, can have a deleterious effect on enrollments, endowments, and a community college’s image, and, as discussed in Chapter One, “billions of dollars are appropriated by state and local governments for community colleges to help pay for the education of students who did not return for a second year” (Schneider & Yin, 2011, p. 2). The decision to leave college is frequently economically deleterious to college dropouts whose decision to leave places them in a position to earn much less over a lifetime of work as well as being burdened with large amounts of debt from loans (DeBerard, Spielmans, & Julka, 2004).
The Community College Student

There are several factors unique to public, two-year community colleges that set them apart from their four-year counterparts, particularly with regard to the issues facing this group of students. Community college students, as opposed to four-year college students, experience less involvement in college activities, have differing goals and expectations with regard to workplace skill development, spend less time on campus, and have lower student satisfaction with the college environment. Adult students have had experiences in life and in their careers that have broadened their general outlook on life. Napoli and Wortman (1998), citing Pascarella and Terenzini (1991), concluded that two-year community college entrants are less likely to persist than four-year college entrants:

Community college students are not only faced with problems of adjusting to the demands of college, but also adjusting to the demands of external factors such as family, friends, and work. In attempting to cope with these demands, community college students are more likely to experience greater strain, leading to a reduced ability to participate and persist in college. By contrast, freshman college students are more likely to be isolated from the day-to-day demands of family, friends, and work and have fewer distractions and greater opportunities to focus on, increasing their likelihood to persist. (p. 2)

Community college students tend to be more statistically at risk of not completing a degree (Pascarella & Terenzini, 1991), low-income, part-time, have limited financial resources, work full-time, are academically under-prepared, and have lower levels of engagement with faculty and the campus (Randall, 2011). Traditional four-year college students, however, tend to be full-time, work part-time, and have fewer demands placed
on them by work, family, and friends. Tinto (1993) proposed that departure from community college is also shaped by external forces such as family and work, as certain activities tended to decrease involvement in the undergraduate experience, such as working off-campus, spending little time on campus outside of class, and commuting to school. Citing Bean and Metzner (1987), Boyles (2000) states “the chief difference between the attrition process of traditional students and nontraditional students is that nontraditional students are more affected by the external environment than by the social integration variables affecting traditional student attrition” (p. 28), and that nontraditional students are not necessarily concerned with the social activities of campus but that of attending college. Students entering a four-year institution are substantially more likely to persist than two-year college participants as “beginning the pursuit of a bachelor’s degree at a two-year institution rather than a four-year institution reduces the chances of earning that degree by fifteen percent” (Pascarella & Terenzini, 2005, p. 639). A 2002 report issued by the U.S. Department of Education, *Short-Term Enrollment in Postsecondary Education: Student Background and Institutional Differences in Reasons for Early Departure, 1996–98*, documents significantly lower persistence rates for students who began their studies at community colleges as compared to those who began at four-year institutions. Some forty-four percent of students who enrolled in community colleges in 1995-96 left with no credential by 1998. In contrast, 18 percent of students who enrolled in a four-year institution in 1995-96 left within three years. As Tinto (1993) states, “the consequences of the massive and continuing exodus from higher education are not trivial, either for the individuals who leave or for their institutions” (p. 1). The average community college student faces numerous obstacles and issues likely to
interrupt and have a negative effect on their enrollment in college. The aforementioned studies clearly illustrate that community college students face multiple challenges in the way of financial, academic, personal and work-related issues.

**The Community College Environment**

The community college environment is characterized by several factors that have an effect on low retention rates. Napoli and Wortman (1998) concluded that, unlike four-year residential institutions, social networks within community colleges are less likely to persist over time, and the differences between community colleges and traditional colleges reduce the likelihood that two-year students would enjoy the same educational benefits of four-year college graduates. Also, community colleges tend to be, for the most part, commuter institutions with open-admissions policies. Usually located in a small town or rural area (Moeck, Katsinas, & Hardy, 2006), community colleges, as compared to traditional four-year institutions, tend to cost less, have more part-time students, have open admissions policies, and their students are usually residents of the area in which the college is located. “They also lack structured communities for students to establish membership in organizations on campus” (Braxton, Hirschy & McClendon, 2004, p. 12), and campus life is not an integral part of the campus environment.

The degree of academic and social integration within community college environments is different as well. According to Fike and Fike (2008), Tinto’s model of student departure states that students progress through stages as they transition from a first time college student to a mature student, and these stages are influenced by the degree of academic and social integration, and both lead to a student’s decision to either leave or remain in college. Layman (2005) found that:
for commuter students who have multiple and often conflicting obligations beyond campus, “they have little or no time or interest in the out-of-class activities, as these students are more likely to possess characteristics that foster lower levels of involvement, such as part-time attendance, full-time work or working more than 10 hours per week; being older; having family responsibilities, and spending less than six hours per week on campus outside of class, making it difficult for commuter students to become involved in the community college experience. (p. 115)

Napoli and Wortman (1998) found that persistence was predicted to be positively and directly associated with academic and social integration and had an impact on persistence behavior among community college students, factors that that two-year students experience less than traditional four-year college students. Bailey & Alfonso (2005) state that “much of the thinking on retention has been based on concepts of student engagement and integration, concepts likely to be more powerful for residential students, who represent a small minority of the student population at community colleges, which are primarily commuter schools” (p. 8). Also, the notions of academic and social integration, concepts used in many four-year student retention studies (Tinto, 1987, 1993), are not as appropriate in two-year institutions as in four-year residential institutions where those elements play a larger part of an individual’s overall college experience. Braxton, Hirschy, and McClendon et al. (2004) found that “unlike residential universities, community colleges lack well-defined and structured communities for students to establish membership” (p.12). The advent of residence halls on community college campuses would challenge these traditional notions of the community college
environment by the possibility of providing structured communities in which students could become and academically and socially integrated into campus life.

**Housing and Community College Campuses**

Student housing at community colleges remains a relatively recent development and is typically reserved for traditional universities and other four-year institutions. Some literature exists on community college residence halls though the majority of literature on campus housing is based in traditional, four-year institutions. However, new residence halls are emerging at many community colleges, and officials are exploring the possibility and potential of on-campus living. A recent search of the Integrated Postsecondary Education Data System (IPEDs) in 2012 listed 224 public, two year community colleges with campus housing facilities. State-wide community college systems such as those in California, Maine, and New York provide housing at all or most of their institutions. It is no longer considered an oddity for a community college to have housing, as two-year institutions try to manage increasing enrollments as well as a higher demand from traditional-aged students who are looking for the “full” college experience in a community college setting (Moeck, Katsinas, and Hardy, 2006). A significant number of community colleges with residence halls exist in many rural areas of the United States and bring significant financial gain to the colleges as well as numerous benefits to students and to student life at these colleges (Moeck, 2005). Chen (2011) states that:

Many community colleges are realizing some of the benefits of living on campus, including better proximity to college resources, the ability to be fully immersed in the campus environment, exposure to international lifestyles, and the ability to
meet other students and build relationships with other students in a similar place in life. Students are now looking for the total college experience but can't afford to go to a four-year institution so many community colleges are also providing a traditional college life with on-campus housing of all shapes and sizes. (p. 1)

The original and primary goal of community colleges was to attract students within a local proximity in order to teach them skills necessary to meet the needs of local towns and communities, to have “intimate relations to the life of the community its serves” (“Community Colleges,” 2012), making it a unique component of higher education. Because the majority of community colleges were founded to serve students who lived within a local district or area, campus housing has generally been seen as unnecessary (Lords, 1999). As community college administrators eventually came to the realization that building student housing would allow community colleges to increase enrollment and revenues, add diversity by attracting international students, and provide a complete college experience (Aquije, 2011), the number of residence halls on community colleges campuses increased dramatically. The first community colleges in the United States to create on-campus housing were built “in rural communities established before the Baby Boom, especially those founded before World War II…East Mississippi Community College (EMCC), a community college in rural Scooba, Mississippi, was established in 1927. EMCC has six residence halls, housing nearly 50% of the students on its Scooba campus” (Moeck, Hardy, and Katsinas, 2006, p. 2).

Building residential facilities served several purposes for community colleges. The desire of many community colleges is to provide a more diverse college experience for its students, and residence halls offered opportunities to further diversify the campus by
attracting more international students. Anderson & Ulf (2006) discuss “the increasing trend toward building residence halls on community college campuses for various reasons, most prominent being the rising costs of attending four-year colleges, which is causing more students to attend two-year colleges” (p. 48), and for students to be able to experience the benefits that living on campus provides. Holland (2009) also discusses how community colleges are adding housing in order to boost appeal. According to Holland, rising university tuitions are pushing more traditional college-age students into two-year schools, and community colleges are also aggressively recruiting athletes and international students, who often prefer or need on-campus housing. The past twenty years have seen a trend in the number of community colleges building residence halls in states spread across the United States (Biemiller, 2009). Lords (1999) discusses how two-year institutions see residence halls as vital to efforts to recruit students. Now community colleges are aiming for a higher profile, and many are embroiled in the same competition with each other for students that four-year institutions have faced in the past decade. On-campus housing can catch the eye of prospective students. According to Denise M. DiGiorgio (Lords, 1999), Vice President for Student Services at Mohawk Valley Community College, in Utica, New York:

Dormitories will become increasingly common at community colleges in the next decade. Community colleges are searching for ways to reach out farther than just their local communities. Among the reasons that community colleges are building student residences is that demand for campus housing is up, students want a residential experience, residence halls can assist with recruiting
international students and athletes, are affordable, start-up costs are nominal, and creating a learning environment is central to their mission. (p. 609)

Offering housing on community college campuses allows two-year institutions to offer a comprehensive educational experience to its students as well as realize the many benefits that come along with providing campus housing to its students.

**Retention Studies at Community Colleges**

*The origins of collecting retention data.* The literature trail on the beginnings of student retention and persistence is scant at best but likely dates back to the 1950s. Before the 1950s, retention and graduation rates were simply trivial conversations and not considered an issue that needed fixing. “Retention did not make a difference because higher education was mostly for elite students who usually had a family business or other skills to fall back on” (W. Habley, personal communication, September 10, 2012). After the GI Bill was introduced, higher education was no longer exclusively the domain for elite students. According to Stephens (2001):

> One of the more sweeping changes to college education in the twentieth century came about in the post-World War II years with the passage of the GI Bill of Rights. The GI Bill, which was developed in the belief that very few GIs would actually use it, paid for veterans to attend college. By the fall of 1946, over a million veterans had taken advantage of this opportunity…Access to college for many more Americans thus increased as a consequence of the GI Bill. (p. 5)

With this new influx of so many students into higher education, the number of students not succeeding began to increase and be noticed. For community colleges, “the two-year retention movement began in the 1960s when administrators began to notice the large
numbers of students not succeeding in colleges” (W. Habley, personal communication, September 10, 2012). According to Habley, Bloom, and Robbins et al. (2012):

A review of literature leads to the conclusion that the term retention was applied to college student enrollment patterns and not widely used until the 1970s. Prior to 1966, no ERIC documents referred to college student retention. Prominent books in the student development field contain no references to retention. And early publications refer to student departure almost universally refer to dropouts, stopouts, and other terms that characterized individual student behavior (and, for the most part, negatively). By 1980, the literature on departure began to feature the term retention as an approach to describing departure behavior at the institutional level. (p. 8)

The view of why students were not succeeding in higher education has changed over the past several decades. During the decades prior to the 1970s, researchers and academics viewed student retention as something directly linked to the individual attributes of students. As Tinto (2005) states, “students who did not stay in college were viewed as less able, less motivated, and less willing to defer the benefits that college graduation was believed to bestow. Students failed, not institutions” (p. 2). This view changed in the 1970s, according to Tinto, as the role of the institutional environment was taken into account to explain a student’s decision to stay or leave college. The connection was made between the environment—the academic and social systems of the institution—and student retention. In the 1980s, this view began to change, and a focus on student engagement with the institution emerged, the paradigm that dominates student retention research to this day.
The early work around student retention began in the 1960s and was led by Alexander Astin, Ernest Pascarella, and Patrick Terenzini. “These researchers served to reinforce the importance of student contact or involvement to a range of student outcomes, not the least of which was student retention. We learned that involvement matters. And we learned that it matters most during the critical first year of college” (p. 2). Their efforts led to practices created specifically to address the first year of college, student-faculty interactions, extended orientation programs, and first-year student seminars, just to name a few. As Tinto (2005) states:

Much of the early work on student retention was drawn from quantitative studies of residential universities and students of majority backgrounds. As such it did not, in its initial formulation, speak to the experience of students in other types of institutions, two and four-year, and of students of different gender, race, ethnicity, income, and orientation. (p. 3)

Retention activities began to be integrated into the mainstream of the institutional life of universities across the United States. According to Tinto (2005):

Over the past forty years, the study and practice of student retention has undergone several changes. First, our understanding of the experience of students of different backgrounds has shaped student retention. Second, we have come to understand how the process of student retention differs in different institutional settings, residential and non-residential, two and four-year. Third, we have come to appreciate the limits of our early models of retention and the importance of involvement. (p. 4)
The focus on student retention and persistence has persevered and become a massive enterprise in higher education as universities, both traditional and two-year, are continually looking for strategies to retain the students they recruit to offset the negative effects felt by the institution and the students who drop out.

The business of student retention. Student retention is now a large industry in higher education. Annual surveys, books and journals, the creation of retention coordinators, national conferences, magazine rankings, and consulting firms that promote their ability to increase institutional retention rates, all have emerged over the past forty years toward one singular effort: to find strategies to reduce the large proportion of students leaving between their first and second year of college. Several organizations collect data on student retention, persistence, and graduation rates. One organization, the American College Testing Program, or ACT, collects information from colleges and universities that will help identify and better understand the impact of various practices on college student retention and persistence. Examples of its work include College Student Retention and Graduation Rates (1983-2006); The Role of Academic and Non-Academic Factors in Improving College Retention; and What Works in Student Retention (1980, 1987, 2004, and 2010) (“What Works,” 2010). Other efforts include the Survey of Retention at Higher Education Institutions (Tinto, 1993), or HES, the Institute of Education Sciences (IES), and the National Longitudinal Survey conducted by the U.S. Department of Labor.

Housing and student retention studies. One variable that has been given little attention in student retention research is that of on-campus housing at public, two-year community college campuses, particularly with respect to any relationship that may exist
between living on campus and first-year student retention. Because the majority of community colleges were founded to serve students who live within commuting distance and to provide low-cost education for students, residential housing at two-year institutions were often seen as unnecessary (Layman, 2005). Prior research indicates the importance of the residential environment and the extent to which it affects student persistence (Blimling, 1999; Kuh, Kinzie, Schuh, & Whitt, 2005; Pascarella & Terenzini, 1991 and 2005; Pike, Schroeder & Barry, 1997; Schroeder & Mable, 1994). The benefits of living in residence halls for undergraduate students have been well documented at traditional, four-year institutions (Purdie, 2007). Pascarella and Terenzini (2005) indicate that living on campus can positively impact retention and graduation because of the capacity of residence halls to facilitate students’ social interactions and involvement with other students, with faculty members, and with their institution, and that “students living on campus are more satisfied with their college experience, do better academically, and are more likely to persist and graduate” (p.603).

Residential housing has the potential for making significant contributions to the overall learning and development of community college students. According to Layman (2005):

*The Student Learning Imperative (SLI)* stressed the importance of linking students’ in-class and out-of-class experiences to create seamless learning environments focused on student learning and academic success. An essential ingredient in efforts to enhance student learning and intellectual development is creating learning environments that motivate students to devote more time to “educationally purposeful activities, both in and out of the classroom” (American
College Personnel Association, 1994). One way out-of-class experiences have been successfully linked with in-class experiences is through programs and activities within residence halls. (p. 2)

Pascarella and Terenzini (2005) also stated that the same benefits — enhanced learning and persistence rates — might translate to two-year residential community colleges. However, there are not enough relevant and meaningful studies to demonstrate this possibility. They found only two relevant dissertations that focused on community college housing. Baker (2006) states that “the research related to four-year institutions is not directly applicable to community college students because of the newness of residence halls at two-year institutions” (p. 4). These theoretical perspectives on retention were developed primarily on four-year college models and have not yielded strong support for their application to community colleges (Atkinson, 2008; Bailey & Alfonso, 2005; Braxton, Hirschy, and McClendon, 2004; Marti, 2009). As Murrell, Denzine, and Murrell (1998) state “in contrast to all the information available about the impact of residence life on student development in four-year colleges and universities, there has been very little research conducted to determine the efficacy and value of student residence on two-year college campuses” (p. 663). “A thorough investigation of the literature on community colleges reveals a limited amount of research conducted on resident students on community college campuses” (Anderson and Ulf, 2006, p. 54). Anderson and Ulf refer to the scarcity of literature as an “empirical black hole.” Layman (2005) states “we are functioning in virtual ignorance of the educational impact of one of the nation’s most significant social institutions” (p. 155). Just six studies regarding two-year community college housing in the United States have been found. However, most of
this research on student retention does not elucidate how living on campus might directly or indirectly affect the retention of students living on two-year college campuses.

Tinto (1983), in *Leaving College: Rethinking the Causes and Cures of Student Attrition*, explored the roots of student departure and incorporates research on student attrition and retention regarding the situations facing commuting institutions and two-year colleges. Though the statistics are now dated, he discusses how rates of degree completion for four-year colleges were just 47% and 39% for two-year colleges in 1986. Tinto concluded that “compared to patterns of departure from largely residential institutions, departure from community colleges appears to be influenced less by social events than by strictly academic matters” (p.78), as community colleges do not possess significant on-campus student communities or attract students who will spend a great deal of time interacting on campus. Tinto also discusses several factors and their impact on community college students such as residential life activities, which can be one of many factors used to break down the sense of isolation new students may feel, which can play a role in student departure.

Layman (2005) researched differences in the level of involvement in activities and satisfaction of resident students and commuter students at a rural community college. Layman states that student residential housing on community college campuses has the potential for making significant contributions to student learning and development, and that residential students have significantly higher levels of interaction with faculty and peers and increased satisfaction and institutional commitment. Layman concludes that “resident students had higher levels of involvement in college activities than commuters.
because these students have more time and opportunities to get involved in many aspects of campus life than do commuter students” (p. 115).

**Academic and social integration.** The two concepts of academic and social integration are consistently studied with regard to student persistence at traditional four-year institutions (Tinto, 1975, 1993; Astin, 1977; Pascarella & Terenzini, 2005. Marti (2009) discusses several factors that can have a positive impact on student persistence and retention:

- Living on campus seemed to have a clear bearing and influence on the extent to which students participate in extracurricular activities, engage more with peers and faculty, have more positive perceptions of the campus social climate, and increased satisfaction with their overall college experience, and abundant evidence indicates that involvements positively influence persistence. (p. 604)

Napoli and Wortman (1995) discuss the applicability of Tinto’s (1975) model to two-year institutions with regard to academic and social integration. They state that “there is a consensus of evidence supporting the importance of academic integration, but the evidence for a social integration connection is mixed” (p. 2). In order to further assess this effect of social integration on persistence, Napoli and Wortman conducted a meta-analysis which concluded that “social integration was observed to be significantly and positively linked to term-to-term persistence but less strongly related to year-to-year persistence” (Napoli & Wortman, 1995, p. 2). Social integration was found to play a significant role in persistence/withdrawal decisions, a finding consistent with Tinto’s (1987, 1993) model but at odds with Tinto’s conclusions reached in 1993. From their
findings, social integration has a large impact on more immediate measures of persistence among first-time full-time community college students.

The literature shows clearly illustrates the importance of the residential environment on the development of college students. The residential living environment has been shown consistently to affect the degree to which students are connected to their environment and able to develop, as well as creating opportunities to participate in social, cultural, and extracurricular activities. According to Nayor (2009), Astin (1977) reached this same conclusion in his study of over 200,000 college students, finding that students living in a residential environment had a greater potential for involvement in campus activities than commuter students. From this literature, it is apparent that student involvement is a key feature of living on campus and correlates with student persistence and success at traditional four-year institutions. There is no evidence, however, to suggest this finding is applicable to two-year community colleges.

Baker (2006) completed a doctoral study in 2006 on the integration into residence hall activities and persistence in residence hall enrollment of community college students and researched whether “a community college student who lives on campus minimally interacts with their community or embraces their surroundings by becoming more involved and seemingly connected to the college and residence hall community” (p. 2). Baker also sought to determine if outside influences affected their persistence in residence hall enrollment. More and more community colleges, according to Baker, are building residence halls in an effort to provide more services to students, eliminate the commute to campus, encourage easy access to college services, and provide the opportunity to develop relationships with other residents. Community college students’
outside responsibilities, and their academic, personal, and interpersonal challenges, all can have an effect on student persistence in the residence halls.

Moeck (2005) completed a study which looked at on-campus housing at public, rural community colleges in the United States. Moeck had two purposes: “to create quantitative baseline data on the extent and level of involvement in community college residence halls, and to provide a descriptive analysis of key issues motivating community college involvement in residence hall operations” (p. 6). He refers to Pascarella and Terenzini’s (1991) claim that living on campus was the single most important determinant of the impact of college on students. Pascarella and Terenzini’s (1991) work reflects over 100 studies related to residence halls yet “does not contain a single study related to residence halls at the nation’s 1,200 publicly controlled two-year community colleges” (p. 2). Moeck isolated and identified community colleges with on-campus housing and listed a variety of reasons that community colleges operate campus housing, but nowhere in those reasons did he list increasing retention and persistence rates among first-time freshmen. Moeck states that residence halls in publicly controlled community colleges represent additional opportunities for recruitment and retention of athletic teams as well as minority students, and the existence of residence halls allows colleges to better serve commuter students, international students, and commuting part-time students by providing a broader college experience. According to Moeck, Hardy, and Katsinas (2006), Moeck also states that “on-campus housing may support student development activities such as clubs, organizations, and other student groups, which may make a difference in student retention and overall satisfaction” (p. 83).
Atkinson (2008) researched the factors impacting retention on several regional, non-residential campuses of Ohio University. Her research confirmed what much of the research on community college retention and persistence already revealed, that most research and theories have focused primarily on the traditional age, full-time student at traditional four-year residential institutions, with limited research available in alternative, non-traditional environments such as community colleges. Residential institutions, according to Atkinson, “have the ability to program opportunities for student involvement in the campus community” (p. 15). She states that residential life is one of those factors that can affect persistence because of its ability to encourage a sense of community and provide opportunities to interact socially. Atkinson also discusses a study focusing on retention and attrition at two-year institutions by Mohammadi (1996), who attempted to establish a reliable set of indicators in order to improve community college retention rates. “It is clear that the demographic and socio-economic factors of a community college student are different from those usually attending a residential campus” (p. 61). Also, they usually have relatively little interaction with other students outside of class and are not involved in campus activities. Mohammadi’s conclusions state that students’ goals for attending college are a strong predictor of retention. His research identified significant variables in determining retention rates, such as goals, hours taken per semester, hours completed, semester and overall GPA.

Andreu (2002) lists and defines several variables that institutional researchers may choose when researching retention at community colleges. Using research from Chipola Junior College to make several recommendations, one question Andreu poses is “whether there are variables known to relate to persistence or dropping out in community colleges”
Astin (1973) found that the effects of living on campus had its greatest impact on the degree attainment of first-year students at small, four-year colleges and a small positive effect on students at large, four-year universities; the effect was minimal for students at two-year universities (Layman, 2005).

Purdie (2007) researched the academic performance and retention of first-year students in Living Learning Communities (LLCs) and Freshmen Interest Groups (FIGs) at several four-year public institutions. He discusses how “the benefits of living in residence halls for undergraduate students (especially first-year students) have been well documented for decades, and multiple studies have confirmed that students who live in residence halls are more satisfied with — and more involved in — the undergraduate experience and are more likely to graduate” (p. 6). Purdie discusses Pascarella & Terenzini’s (2005) research linking living in a residence hall with student retention, and adds that there are differences between community colleges and four-year colleges, and the variables shown to positively affect retention at four-year schools need to be taken into account when analyzing the factors that affect retention at two-year institutions.

Layman (2006) conducted a study that the author refers to as “a preliminary investigation into whether resident students’ and commuter students’ reported levels of involvement in activities, achievement of educational goals, and satisfaction with the educational experience were the same or significantly different at one rural community college.” Layman mentions that an increasing number of community colleges are opening campus housing. Results indicated that statistically significant differences between
resident and commuter students existed in three areas: involvement in college activities, estimates of gains or progress towards educational goals, and student satisfaction with the college environment. In addition, resident students displayed higher levels of involvement in college activities than commuters.

Catt (1998) researched adjustment problems of freshmen attending a distant, non-residential community college. Specifically, Catt looked at perceived difficulties traditional-aged students living on their own encounter when attending a community college that has no support systems. Catt discusses how “community college students are overwhelmed by life challenges that result in students either leaving prematurely or being academically unsuccessful” (p. 1), and that community colleges have an interest in this situation because they have an interest in retaining their students. With “the attrition rate of community colleges at fifty percent” (p. 12), understanding why students leave and providing services necessary to assist these students is important. A desire and need for housing close to campus was mentioned several times by both the students and parents who were interviewed, as this would help with community college students’ transition to college and any perceived difficulties these students might experience.

What Works in Student Retention (2010), a report issued by American Collegiate Testing on community colleges, surveyed the chief housing officers at 949 community colleges asking them to identify factors affecting student retention and attrition at their institution. Attrition factors with the lowest means included residence hall facilities as well as living off campus. Respondents were also asked to identify, from a pool of practices presented in in earlier section of the report, three practices that made the
greatest contribution to student retention on their campus, of which housing or living on campus was not mentioned by the respondents.

Several studies were found that discussed factors affecting the retention of community college students including Anderson & Ulf (2006), Jacobs-Biden (2006), Rasmussen (2004), Rowland (2003), and a report by the Lumina Foundation (Bailey & Alfonso, 2005). However, not one of these studies mentions or researches any relationship that may exist between living on campus and the retention of first-year students.
CHAPTER THREE: RESEARCH METHODS

Introduction

This chapter describes the methods employed to investigate whether a relationship existed, if any, between attending a public, two-year community college in the United States with or without campus housing and the retention of first-year students. All methods utilized in this study were exempt from Human Research Subject Regulations and required no IRB oversight, as no human subjects were studied, and data from the IPEDS database are available to the public.

This study is based upon the collection of quantitative data available through the Integrated Postsecondary Education Database System (IPEDS) at the National Center for Education Statistics (NCES) at the Department of Education (DOE). The data collected through IPEDS includes data for the years 2007-2011, which includes 224 public, two-year community colleges in the United States with on-campus housing, as well as 224 public, two-year community colleges in the United States without on-campus housing. Student characteristics for both sets of data were identified for analysis and comparison as to their potential effect or relationship with regard to first-year student retention, including: first-time freshmen fall-to-fall retention rates; age; financial aid received; graduation rates; race; and sex.

Research Questions

The research questions for this study included:

1. What relationship exists, if any, between attending a public, two-year community college in the United States with or without campus housing and the retention of first-year students?
2. What relationship exists, if any, between age of first-year students attending a public, two-year community college in the United States with or without campus housing and student retention?

3. What relationship exists, if any, between the financial aid received by first-year students attending a public, two-year community college in the United States with or without campus housing and student retention?

4. What relationship exists, if any, between the race of first-year students attending a public, two-year community college in the United States with or without campus housing and student retention?

5. What relationship exists, if any, between the sex of first-year students attending a public, two-year community college in the United States with or without campus housing and student retention?

6. What relationship exists, if any, between the graduation rates of first-year students attending a public, two-year community college in the United States with or without campus housing and student retention?

**Research Design and Population**

The research design is a quantitative study. This study utilized a national approach by collecting extant data from the National Center for Educational Statistics’ Integrated Postsecondary Education Data System (IPEDS) on the first-year student retention rates and other relevant student characteristics from 224 public, community colleges with campus housing. A second population consisting of 224 public, two-year community colleges without campus housing were identified and randomly selected to extract extant data from IPEDS to use as a basis for comparison to determine any differences in first-
year student retention rates and the other characteristics listed in this study. In order to evaluate whether a relationship existed between on-campus housing and student retention at public, two-year community colleges, several other types of quantitative information were acquired. A starting point from which to perform several data extractions from the IPEDS database was to create a set of descriptive data for use in the analysis of all public, two-year community colleges with and without on-campus housing. The following enrollment profile characteristics were identified and gathered to assess their impact on student retention, including: first-time freshmen fall-to-fall retention rates; age; financial aid received; graduation rates; race; and sex.

Data Collection and Analysis

Data collection. Data collection methods that were utilized in this study included collecting extant data through the IPEDS database in order to identify the first-year student retention rates of the 224 public, two-year community college campuses with on-campus housing. Extant data were also collected through IPEDS on 224 randomly selected public, two-year community college campuses without on-campus housing in order to identify first-year student retention rates at these institutions as a basis for comparison. The data collected through IPEDS included other student variables which also affected first-year student retention rates, such as: first-time freshmen fall-to-fall retention rates; age; financial aid received; graduation rates; race; and sex. The purpose of the data collection through the use of IPEDS was to identify institutions that provided on-campus housing to their students and then compare their rates of first-year student retention to randomly selected public community colleges without on-campus housing.
**Data analysis.** In order to analyze the collected data, a t-test was utilized in order to examine the effects of living on a public, two-year community college campus on first-year student retention. The data collected from the IPEDS database were parametric in nature, and statistical differences in outcomes were determined and yielded themes or trends related to the purpose of this study. The collected data were run through the Statistical Package for the Social Sciences (SPSS), a software program of statistical analysis which serves to create sampling distributions based on the entered variables in order to analyze the defined set of student characteristics and draw conclusions from the data. Through the data analysis, an understanding of any possible relationship between living on campus and first-year student retention at public, two-year community colleges was better understood. Descriptive statistics on the relevant student characteristics identified for this research study that were captured through IPEDS will be presented in the next chapter. Differences in mean first-year student retention rates were calculated and compared for institutions who reported they offered campus housing, as well as for those institutions that reported not offering campus housing.

**Limitations and Delimitations**

The research design included limitations and factors beyond the researcher’s control that could have affected how the results of this study are interpreted. One potential issue is that of generalizability, as all public, two-year community colleges with on-campus housing and 224 public, two-year community colleges without campus housing were identified and selected to gather extant data from in this study. These findings may not be generalizable to the remainder of community colleges in the United States not included in the study nor to the private or tribal community colleges. Also, public community
Colleges were selected for analysis and comparison in this study because they represent the majority (87%) of all community colleges in the United States, with independent and tribal community colleges representing just 13% (AACC, 2012).

There were several delimitations of this study. The research problem selected was chosen in order to determine what relationship existed, if any, between the retention of first-year students in two-year public community colleges in the United States and living in campus housing vs. living off-campus and did not include other aspects of the community college environment or experience that might have affected first-year student retention. The study relied on data collected from the IPEDS database as opposed to direct observations of institutional practices and students. So the researcher is making an assumption that the data reported to IPEDS is accurate. Though the American Association of Community Colleges (AACC) lists almost 1,167 community colleges in the United States, only 224 were found to have on-campus housing. A group of 224 public, two-year community colleges without on-campus housing were also identified and randomly selected to serve as a group for comparison with regard to first-year student retention and other student characteristics listed in this study.

**Summary**

The procedures outlined in this chapter explain the quantitative methods used to assess whether a relationship exists between the retention of first-year students in public, two-year community colleges in the United States and living in campus housing vs. living off-campus. Data collection procedures consisted of the collection of extant data from the Integrated Postsecondary Education Data System (IPEDS) database. Student retention theories were used to guide the study as well as create a framework to develop research
questions based upon relevant student characteristics. The methods for validating the findings of this research were also reviewed. Chapter Four presents the results obtained from the data collection and analysis.
CHAPTER FOUR: RESULTS

Introduction

The purpose of this study was to determine what relationship existed, if any, between attending a public, two-year community college in the United States with or without campus housing and the retention of first-year students. This study utilized a national approach by collecting extant data from the Integrated Postsecondary Education Data System (IPEDS) on the retention rates and other variables from 224 public two-year community colleges in the United States with housing and 224 randomly selected public two-year community colleges without campus housing. This chapter presents the data and analysis, and is divided into three major sections: the first describes the population, samples, and variables; the second outlines the research methods; and the final section examines the findings of the study.

Population, Samples, and Variables

As noted in Chapter Three, the research population for this study included 448 public two-year community colleges in the United States. Of this population, extant data was collected for the years 2007-2011 through the Integrated Postsecondary Educational Database System (IPEDS) for 224 public two-year community colleges with campus housing and 224 public two-year community colleges without campus housing. Upon review of the data, in order to find a group of public, two year community colleges without campus housing for comparison purposes, 224 of 1,082 community colleges in the United States identified through IPEDS were randomly selected. Though the sample in this data consists of 448 public, two-year community colleges (n = 448) with and without campus housing, not all community colleges reported data for all the years...
studied in this research, so the population analyzed varied depending on the data reported to IPEDS. Despite any unequal samples in the populations studied, this had no impact on the findings.

Five student background variables were also examined in this study: age, financial aid, graduation rates, race, and sex. An analysis of each of these student variables was conducted in order to determine any statistically significant differences that might emerge in relation to first-year student retention and whether the aforementioned student variables could be considered predictors of student retention.

**Research Methods**

A sample of 448 community colleges was included in this study (n=448). The sample used in the data analysis represents 41% of the total public, two-year community colleges in the United States. Of this sample, 224 public two-year community colleges were identified as having campus housing, and a random sample of 224 community colleges without campus housing were identified to serve as a basis for comparison.

A t-test was conducted for all of the student variables in this analysis. The t-test was appropriate for this research, as it assessed whether the means of two groups were statistically different from each other and whether the two variables were related. Given the data sets analyzed in this research study consisted of parametric data, statistical differences in observed and expected outcomes were determined. Through this data analysis, a better understanding of any relationship between attending a public two-year community college with or without campus housing and the retention of first-year students emerged. The major findings of each research question are discussed in the following sections. Through the use of a t-test in analyzing the data, this researcher was able to observe the different average scores for each variable and group, as well as determine,
through the obtained p-values, if the results represented a real or chance difference between the two populations.

Findings

Research Question One: What relationship exists, if any, between attending a public, two-year community college in the United States with or without campus housing and the retention of first-year students? An independent samples t-test in Table 1 reveals the p-values of the retention rates to be statistically significant for community colleges with and without campus housing from 2008 through 2011 and not statistically significant for 2007. Overall, the results revealed that the retention rates for community colleges without campus housing were statistically significant and larger than community colleges with campus housing. The results from this part of the research do not indicate any relationship to exist between community colleges with campus housing and first-year student retention.

Table 1

T-test Results of Retention Rates.

<table>
<thead>
<tr>
<th>Provides Housing 1=Yes; 2=No</th>
<th>Mean Retention Rate</th>
<th>Sig. (2-tailed)</th>
<th>T-test for Equality of Means (t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007 Full-time retention rate</td>
<td>224 56.19</td>
<td>.183</td>
<td>-1.135</td>
</tr>
<tr>
<td>2008 Full-time retention rate</td>
<td>223 55.15</td>
<td>.000*</td>
<td>-4.021</td>
</tr>
<tr>
<td>2009 Full-time retention rate</td>
<td>223 56.66</td>
<td>.005*</td>
<td>-2.796</td>
</tr>
<tr>
<td>2010 Full-time retention rate</td>
<td>223 56.26</td>
<td>.000*</td>
<td>-3.760</td>
</tr>
<tr>
<td>2011 Full-time retention rate</td>
<td>223 55.32</td>
<td>.000*</td>
<td>-3.901</td>
</tr>
</tbody>
</table>

* p < .05 indicates a significant statistical difference between groups.
This part of the study did not look at differences in retention rates between male and female students but overall retention rates between public two-year community colleges with and without campus housing, an area that needs further research with regard to differences in first-time retention rates. These findings are also unexpected given the majority of research related to student retention states the importance of the residential environment and that students living in campus housing are more likely to persist than students who commute (Blimling, 1999; Kuh, Kinzie, Schuh, & Whitt, 2005; Pascarella & Terenzini, 1991, 2005; Pike, Schroeder, & Barry, 1997; Schroeder & Mable, 1994). However, the bulk of this research was conducted with students at traditional, four-year universities.

**Research Question Two: What relationship exists, if any, between age of first year students attending a public, two-year community college in the United States with or without campus housing and student retention?** For each year studied, 2007 through 2011, Table A1 (See Appendix) reveals that the largest age groups of students attending community colleges with and without campus housing was full-time, first-time 18-19 year old students, and the second largest group being 20-21 year-old students. Both groups totaled 59.5% of the entire population of all age groups analyzed in this study. The sum of the means for all other age groups studied totaled 40.06%. The sum total of all means for all years studied for first-time, full-time 18-19 year-old students at community colleges with campus housing was 4,163.58 students and 5,094.58 students for community colleges without campus housing, indicating a larger number of students within this age range attend community colleges without campus housing. The sum of the means for all years studied for first-time, full-time 20-21 year-old students for
community colleges with campus housing was 1,855.88 students, and 3,256.80 students at community colleges without campus housing, indicating a larger number of students within this age range attending community colleges without campus housing. The sum of the means for all years studied for students in the 22-24 age range totaled 1157.54 students at community colleges with campus housing and 1,933.35 students at community colleges without campus housing. Students in the 25-29 age range for all years studied comprised 1,014.07 students at community colleges with campus housing and 1,591.29 at community colleges without campus housing. This was the trend for every year studied with these two age groups, which represent the largest two age groups of students at the 448 public, two year community colleges studied. The sum of the means for all years studied for students in the 30-34 age range comprised 584.92 students at community colleges with campus housing and 879.26 students at community colleges without campus housing. The sum of the means for all years studied for students in the 35-49 age range totaled 826.9 students at community colleges with campus housing and 1228.66 students at community colleges without campus housing. An independent analysis t-test revealed p-values with statistically significant differences for all age groups from 2007 to 2011 at community colleges with and without campus housing. Of the 45 total age categories listed in Table A1 (See Appendix), only 11 revealed no significance as opposed to 34 that were statistically significant.

The results of the data analysis reveal several findings. First, the means favor community colleges without campus housing for all years studied. Second, a t-test produced p-values that revealed statistical significance for most age categories analyzed in this study. Third, the largest age groups attending both community colleges with and
without campus housing were the 18-19 and 20-21 year-old students. This finding is contrary to a majority of research on community colleges (Fike & Fike, 2008; “Students At,” 2012), which states that the majority of community college students tend to be older than traditional age college students. Last, any possible relationship between the age of students attending public two-year community colleges with and without campus housing and first-year student retention was unclear and unable to be determined in this study.

Research Question Three: What relationship exists, if any, between the financial aid received by first-year students attending a public, two-year community college in the United States with or without campus housing and student retention?

For all first-time, full-time, undergraduate/degree-seeking students, the means favored community colleges with campus housing. More specifically, the means revealed that a larger percentage of full-time, first-time students received financial aid at community colleges with campus housing than at community colleges without campus housing.

Table 2

*T-test Results for Financial Aid.*

<table>
<thead>
<tr>
<th>Provides Housing</th>
<th>N</th>
<th>Mean</th>
<th>Sig. (2-tailed)</th>
<th>T-test for Equality of Means (t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1=Yes; 2=No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent full-time undergraduates receiving any financial aid (2010-11)</td>
<td>1</td>
<td>223</td>
<td>84.14</td>
<td>.000*</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>222</td>
<td>76.74</td>
<td></td>
</tr>
<tr>
<td>Percent of full-time first-time undergraduates receiving any financial aid (2009-10)</td>
<td>1</td>
<td>223</td>
<td>82.49</td>
<td>.000*</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>221</td>
<td>72.64</td>
<td></td>
</tr>
<tr>
<td>Percent of full-time first-</td>
<td>1</td>
<td>223</td>
<td>80.09</td>
<td>.000*</td>
</tr>
</tbody>
</table>
Table 2 reveals that an average of the sum of all means of students at community colleges with campus housing receiving financial aid totaled 81.25%, while community colleges without campus housing totaled 71.15% of students receiving financial aid. A t-test also produced p-values that revealed differences to be statistically significant for all years studied. The results indicated more students at community colleges with campus housing received financial aid than did students at community colleges without campus housing.

The data analysis revealed a relationship between living on campus and receiving financial aid as more students received financial aid at community colleges with campus housing. We also know from research that one factor impacting retention is financial aid, and financial aid recipients have higher retention rates than non-aid recipients (Downing, 2008). Thus, the data analysis may imply a relationship between living on campus and the retention of first year students at public two-year community colleges in this study. More research is needed to further identify if this relationship does exist.

**Research Question Four: What relationship exists, if any, between the race of first-year students attending a public, two-year community college in the United States with or without campus housing and student retention?** An examination of the means revealed that, for all years studied except 2007, the largest racial group was White/Non-Hispanic, followed by Hispanic/Latinos, and Black/African American for
both community colleges with and without campus housing. In 2007, the third largest racial group was Race/Ethnicity unknown. More specifically, a sum of the average of all means analyzed from 2007 to 2010 revealed the White/White non-Hispanic group to be 63.8% of community colleges with campus housing and 52.5% at community colleges without campus housing. The second largest group, Hispanic or Latino/Hispanic constituted 45.2% at community colleges with campus housing and 22.1% at community colleges without campus housing. The third largest group, Black or African American, constituted 14.6% of community colleges with campus housing and 16.4% of community colleges without campus housing. Also, a sum of the average of the means of the “Grand Total-All Students Undergraduate Degree-seeking” group for all years surveyed in this research revealed that the means favored community colleges without campus housing. The p-values in an independent samples t-test revealed statistically significant differences in favor of community colleges without campus housing, and significant differences were found for all years studied with an average p-value of .003.

The results of the data analysis reveal several findings. First, the means favor community colleges without campus housing for all years studied. Second, a t-test produced p-values that revealed statistical significance for all years analyzed in this study. Third, the largest group of students attending both community colleges with and without campus housing was White/White non-Hispanic, and the next largest group being Hispanic or Latino/Hispanic. This finding supports other research on community college students, which states that the majority of community college students tend to be White/non-Hispanic yet are enrolling higher percentages of minority students (American Association of Community Colleges, 2012; Fike & Fike, 2008). These results also
confirm findings from a study by the Center for Community College Student Engagement (2010), which states that after White/non-Hispanic, the next two largest groups of students are Hispanic/Latino and Black/African American students. Lastly, given IPEDS does not separate retention data according to race but by full-time and part-time cohorts, any possible relationship between the race of students attending public two-year community colleges with and without campus housing and first-year student retention was unable to be determined in this study. It is a concern that the two-year college completion rate for African-American, Latino, and Native American students is only 24 percent (Chen, 2009).

Research Question Five: What relationship exists, if any, between the sex of first-year students attending a public, two-year community college in the United States with or without campus housing and student retention? Table A3 (See Appendix) revealed the means and significance for all undergraduate, full-time, degree seeking, first-time students. The results show the mean totals for both males and female groups at community colleges without campus housing for each year, 2007-2011, was larger than community colleges with campus housing, indicating a larger number of students living off campus than at community colleges with campus housing. Also, the means reveal that for campuses with and without campus housing, females were consistently the larger group for all years studied. This finding is consistent with other research which states that the majority of community college students tend to be female (Fike & Fike, 2008; Mullin, 2012; AACC, 2012). P-values of an independent samples t-test revealed no statistical significance for all years studied for male and female students at community colleges with campus housing and community colleges without campus housing.
housing. Though studies vary on the role of gender and its association with student retention (Andreu, 2002; Graybeal, 2007; Mohammadi, 1996), this analysis was not able to determine the male and female percentages of students living in campus housing at the 224 public, two-year community colleges in this research, given IPEDS does not separate retention data according to gender but by full-time and part-time cohorts only. So any relationship between the retention of first-year students in public, two-year community colleges and the sex of students living in campus housing was inconclusive.

Research Question Six: What relationship exists, if any, between the graduation rates of first-year students attending a public, two-year community college in the United States with or without campus housing and student retention? The results in Table 3 reveal that for every year studied, 2007-2011, community colleges with campus housing had higher graduation rates than community colleges without campus housing. Also, the data analysis revealed that both men and women at community colleges with campus housing displayed significantly higher graduation rates than men and women at community colleges without campus housing during each year studied. An average of the sum of the means revealed the graduation rate to be 27.08% at community colleges with campus housing and 25.63% at community colleges without campus housing. Overall, there was no significance found with regard to the graduation rates of community colleges with and without campus housing. However, a review of the p-values resulting from a t-test conducted revealed statistically significant differences were found in the graduation rates of women at community colleges with and without campus housing during 2007, 2008, and 2009, and 2011, as presented in Table 3.
<table>
<thead>
<tr>
<th>Provides Housing (1=Yes, 2=No)</th>
<th>N</th>
<th>Mean</th>
<th>Sig (2-tailed)</th>
<th>T-test for Equality of Means (t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduation rate total cohort (2011)</td>
<td>1</td>
<td>218</td>
<td>27.29</td>
<td>.171</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>223</td>
<td>25.19</td>
<td></td>
</tr>
<tr>
<td>Graduation rate men (2011)</td>
<td>1</td>
<td>218</td>
<td>25.96</td>
<td>.543</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>222</td>
<td>24.98</td>
<td></td>
</tr>
<tr>
<td>Graduation rate women (2011)</td>
<td>1</td>
<td>218</td>
<td>28.78</td>
<td>.029*</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>223</td>
<td>25.32</td>
<td></td>
</tr>
<tr>
<td>Graduation rate total cohort (2010)</td>
<td>1</td>
<td>219</td>
<td>27.10</td>
<td>.718</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>223</td>
<td>26.50</td>
<td></td>
</tr>
<tr>
<td>Graduation rate men (2010)</td>
<td>1</td>
<td>218</td>
<td>26.05</td>
<td>.653</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>220</td>
<td>25.30</td>
<td></td>
</tr>
<tr>
<td>Graduation rate women (2010)</td>
<td>1</td>
<td>219</td>
<td>27.98</td>
<td>.198</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>220</td>
<td>25.90</td>
<td></td>
</tr>
<tr>
<td>Graduation rate total cohort (2009)</td>
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<td>219</td>
<td>26.95</td>
<td>.399</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>222</td>
<td>25.60</td>
<td></td>
</tr>
<tr>
<td>Graduation rate men (2009)</td>
<td>1</td>
<td>219</td>
<td>25.78</td>
<td>.349</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>216</td>
<td>24.26</td>
<td></td>
</tr>
<tr>
<td>Graduation rate women (2009)</td>
<td>1</td>
<td>219</td>
<td>27.79</td>
<td>.038*</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>217</td>
<td>24.48</td>
<td></td>
</tr>
<tr>
<td>Graduation rate total cohort (2008)</td>
<td>1</td>
<td>219</td>
<td>26.79</td>
<td>.242</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>221</td>
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<td>2</td>
<td>216</td>
<td>23.22</td>
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<tr>
<td>Graduation rate women (2008)</td>
<td>1</td>
<td>219</td>
<td>28.10</td>
<td>.017*</td>
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<td>2</td>
<td>217</td>
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<td>Graduation rate total cohort (2007)</td>
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<td>.410</td>
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<td>2</td>
<td>221</td>
<td>25.94</td>
<td></td>
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<td>.336</td>
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<tr>
<td></td>
<td>2</td>
<td>215</td>
<td>24.00</td>
<td></td>
</tr>
<tr>
<td>Graduation rate women (2007)</td>
<td>1</td>
<td>219</td>
<td>29.01</td>
<td>.017*</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>216</td>
<td>25.21</td>
<td></td>
</tr>
</tbody>
</table>

* *p < .05 indicates a significant statistical difference between groups.*
This data analysis reveals several important findings. First, the graduation rates at community colleges with campus housing are significantly higher than the graduation rates at community colleges without campus housing, which may indicate that there is a relationship between first year student graduation rates and living on campus. Also, the data analysis indicates that women graduate at statistically significant higher rates than men, which may imply that women who live on campus graduate at higher rates than women who live off campus.

**Discussion of Results**

The primary purpose of this study was to what relationship existed, if any, between attending a public, two-year community college in the United States with or without campus housing and the retention of first-year students. T-tests were used in this study to analyze the data. Because a t-test assesses whether the means of two groups are statistically different from each other, it is a typical method to employ when comparing the means of two groups and was appropriate for this study. The t-tests used in this research were intended to measure several variables: if a relationship existed between attending a public, two-year community college in the United States with or without campus housing and the retention of first-year students; if a relationship existed between the age of first-year students attending a public, two-year community college in the United States with or without campus housing and first-year student retention; if a relationship existed between the financial aid received by first-year students attending a public, two-year community college in the United States with or without campus housing and first-year student retention; if a relationship existed between the race of first-year students attending a public, two-year community college in the United States with or
without campus housing and first-year student retention; if a relationship existed between the sex of first-year students attending a public, two-year community college in the United States with or without campus housing and first-year student retention; and if a relationship existed between the graduation rates of first-year students attending a public, two-year community college in the United States with or without campus housing and first-year student retention. The means for each of the variables in this study were calculated and analyzed as well as the significance of whether a statistically significant relationship existed between each variable and attending a public, two-year community college in the United States with or without campus housing and the retention of first-year students. The results are discussed below.

The results of this study revealed that the retention of first-year students at community colleges without campus housing was significantly higher than community colleges with campus housing except for 2007, when no statistical significance was found. For the years of financial aid studied, the results revealed significantly higher levels of financial aid received by students at community colleges with campus housing. For the age variable, the trends were similar in that the two largest age groups for community colleges with and without campus housing were the 18-19 and 20-21 year old groups respectively even when compared to all other age groups combined. Other findings from these data revealed that White and White/non-Hispanic students were the largest group of students at both community colleges with and without campus housing for every year studied in this research.

There were two unanticipated findings of this research. The first finding revealed that for all years studied in this research, the graduation rates for community colleges with
campus housing were higher than those of community colleges without campus housing and significantly higher for women at both community colleges with and without campus housing in 2007, 2008, 2009, and 2011. Another unanticipated finding was the first-year student retention rates being higher for community colleges without campus housing. This finding could be the result of how data are categorized and listed in IPEDS. More specifically, the data extracted from IPEDS are not separated into different categories for undergraduate degree-seeking and certificate-seeking students, which could account for the difference in the retention rates being higher for community colleges without campus housing, given that certificate-seeking students complete their certificate and leave community colleges after just one year, and degree-seeking students are typically enrolled in two-year programs and remain for more than just one year at a community college in order to complete their program of study.

This study employed several variables — age, financial aid, gender, graduation rates, race, sex — in order to determine if a relationship existed between attending a public, two-year community college in the United States with or without campus housing and the retention of first-year students. As noted in Chapter Two, community college students are typically older; academically underprepared; minority; part-time; female; first generation college students; and receive financial aid. The results of the data analysis revealed that this to be the case with regard to sex and students receiving financial aid. The variables of academic unpreparedness, first-generation college students, and part-time status were not analyzed in this study. Also, of the aforementioned variables that were analyzed — age, financial aid, gender, race, sex — were inconclusive as to being positive correlates of any relationship between attending a public, two-year community college.
college in the United States with or without campus housing and the retention of first-year students. With regard to graduation rates, however, the findings support several student retention theories that students living in residence halls persist and graduate at higher levels than students lacking the residential experience (Pascarella & Terenzini, 1991; Tinto, 1993), although these models were developed primarily for analyzing student retention with traditional, four-year college students. The results of this research indicated this to be the case, in that students at community colleges with campus housing graduated at higher rates than students at community colleges without campus housing for all years studied, which may indicate a relationship between first-year student retention and living in campus housing.

A relationship between living on campus and first-year student retention could not be established given the retention rates of community colleges without campus housing were significantly higher than those of community colleges with campus housing. The impact of these variables with regard to living on campus and student retention needs to be further assessed. A summary, discussion of the results, and recommendations for further research and study are presented in the next chapter.
CHAPTER FIVE: SUMMARY, DISCUSSION, AND RECOMMENDATIONS

This chapter contains conclusions and discussion concerning the purpose of this study, which explored whether a relationship existed between attending a public, two-year community college in the United States with or without campus housing and the retention of first-year students. This chapter explores the themes derived from the quantitative data extracted from IPEDS. It includes an overall summary and discussion of the populations and student variables researched and analyzed in this study, the results of the study, and recommendations for further study.

Demographics of the Population

This study consisted of two populations: 224 public, two-year community colleges with campus housing and a random sample of 224 public, two-year community colleges in the United States without campus housing. All data were extracted through the Integrated Postsecondary Education Data System (IPEDS) database. The population of community colleges (n=448) used in this study represents 41% of all public, two-year community colleges and 38.4% of all community colleges in the United States.

The population analyzed in this study was of particular interest given the low retention rates experienced by community colleges and the fact that so few community colleges across the United States provide campus housing for their students, yet the benefits of living on campus for students are so many, as discussed in Chapter Two. The purpose of this study was to investigate whether a relationship existed between attending a public, two-year community college in the United States with or without campus housing and the retention of first-year students. Considering the low retention rates experienced by community colleges across the United States, little to no research has
been conducted that addresses or answers the question as to whether there is a relationship between living on campus and first-year student retention at the type of college that was focused on in this study.

**Significance of This Study**

This study bears significance for several reasons: the rising enrollments of community colleges across the United States over the past decade; the increasing number of community colleges that are building campus housing (Biemiller, 2009); the low retention rates among community colleges for first-time, full-time students; the fact that community college leaders are being asked to identify and develop appropriate indicators of student retention (Wild & Ebbers, 2002); the lack of studies that have investigated whether a relationship exists between living on campus and the retention of first-year students; the fact that community colleges are being held accountable for the low retention and graduation rates of their students (Schwartz, 2010); and the consequences of low college completion rates—lost tuition and fees, student attrition, and the lack of ability of college dropouts to obtain and secure jobs that provide opportunities to make higher wages. Moltz (2008) stated that students seeking either an associate degree or higher who start at a two-year institution have a lower chance of achieving their educational goals than students who start at a four-year institution. This so-called “community college penalty” can be discouraging to some, especially in a time of rising enrollments at open-access institutions, due in part to economic distress. Many community colleges are seeing the need for a comprehensive evaluation of their retention and student success initiatives. Given continuing resource constraints and low retention rates, the challenge is to take a careful look at data about student retention and student
success and implement new strategies that will produce better results. In this current fiscal environment of decreasing state funding, student retention has become essential for economic survival as calls for accountability intensify and is “central to the healthy position of an institution” (Atkinson, 2008, p. 16). Whether student retention is viewed as an institutional effectiveness issue, a financial issue, or an enrollment management issue, it continues to be a challenge for community colleges. “We cannot afford to continue to operate in ignorance of the educational influence of a set of nearly 1,200 postsecondary institutions that educate almost 40% of our students” (Pascarella, 1999, p. 13). Low retention rates reflect an unnecessary loss of institutional and individual resources (Pascarella & Reason, 2005). Clearly, retention rates represent an issue that needs further study.

The purpose of this study was to explore whether a relationship existed, if any, between attending a public, two-year community college in the United States with or without campus housing and the retention of first-year students. Much research has been done on student retention at traditional, four-year campuses and community college campuses. However, little to no research has been done on public, two-year community college student retention as it relates to living in campus housing. The literature specific to this topic is essentially non-existent. As discussed in Chapter Two, living on campus has the potential for making significant contributions to college student retention (Astin, 1999; Pascarella & Terenzini, 2005) and the learning and development of students. Other studies by Pascarella and Terenzini (1991) and Tinto (1993) indicated that students living in campus housing persisted and graduated at higher rates than students who lacked the residential experience (Li, Sheely, & Whalen, 2005). However, this research is based
almost exclusively on studies of traditional, four-year institutions, and these models have not yielded strong support for their application to community colleges (Bailey & Alfonso, 2005). To date, residential community college environments have not been studied in any meaningful way (Moeck, Hardy & Katsinas, 2006). It is the hope of this researcher that this study will shed more light on first-year student retention as it relates to living in campus housing at residential community colleges. A discussion and summary of the major findings for each research question will be presented later in this chapter.

**Overview of Results**

As discussed in Chapter Four, t-tests were performed on all variables identified for analysis in this study. With regard to the first variable, first-year student retention, student retention rates were found to be higher at community colleges without campus housing, a statistically significant finding for all years studied except 2007. This finding was unanticipated, because the majority of research on first-year student retention has shown that students living on campus are more likely to persist than students who commute to campus (Pascarella & Terenzini, 2005; Schroeder & Mable; 1994; Tinto, 1993); but, as mentioned in Chapter Two, these retention studies are based primarily on traditional, four-year institutions (Bailey and Alfonso, 2005). There are several potential causes for this finding. One is that the first-year retention data extracted from IPEDS does not separate undergraduate degree-seeking and certificate-seeking students into different categories. Most certificate-seeking students complete their program after one year and leave the institution, and this could account for part of the difference in the retention rates being higher for community colleges without campus housing. Another possible cause is the set of characteristics attributed to community college students discussed in Chapter 2.
Community college students tend to be less involved in college activities, spend less time on campus, are part-time, low-income, academically under-prepared, work full-time, and have increased family demands on their time. Pascarella and Terenzini (1991) stated that two-year community college entrants are less likely to persist than four-year college entrants because they are more likely to experience greater strain, leading to a reduced ability to participate and persist in college. These results revealed that living in campus housing may not be a significant predictor of first-year student retention at public, two-year community colleges in the United States.

An analysis of the age variable revealed the largest group of students attending community colleges to be 18-19 year old students, with the next largest group being 20-21 year old students. These results were consistent for both community colleges with and without campus housing. This finding is contrary to a majority of research about community colleges (Fike & Fike, 2008; “Students At,” 2013), which states that the majority of community college students tend to be older than traditional-age college students. It was not possible to determine any relationship between the age of students attending public two-year community colleges with and without campus housing and first-year student retention in this part of the data analysis.

The analysis of the financial aid variable revealed that a significantly larger percentage of students received financial aid at community colleges with campus housing, with significant statistical differences emerging for all undergraduate students that received any type of financial aid at community colleges with campus housing. The data analysis revealed there to be a relationship between living on campus and receiving financial aid, a finding consistent with previous research which showed that receiving
financial aid was a positive correlate of the fall to fall retention of first-year students (Fike & Fike, 2008).

An examination of the race variable revealed the largest groups for all years studied were “White/Non-Hispanic,” followed by “Hispanic/Latino” and “Black/African American” for both community colleges with and without campus housing, with the “White/Non-Hispanic” group comprising 63.8% of students at community colleges with campus housing and 52.5% at community colleges without campus housing. This finding supports other research on community college students, which states that the majority of community college students tend to be “White/Non-Hispanic” although these colleges are enrolling higher percentages of minority students (American Association of Community Colleges, 2012; Fike & Fike, 2008). IPEDS does not separate student retention data according to race, so any possible relationship between the race of students attending public two-year community colleges and first-year student retention with regard to campus housing was impossible to determine in this part of the analysis.

An analysis of the sex variable revealed that the means for all groups of males and females at community colleges without campus housing were larger than the means for community colleges with campus housing for each year studied. Females were consistently the larger group for all years studied, a finding consistent with other research which states that the majority of community college students tend to be female (Fike & Fike, 2008; Mullin, 2012; AACC, 2012). This analysis was not able to determine male and female percentages of students living in campus housing nor any differences in male and female retention rates, so any relationship between the retention of first-year students
in public, two-year community colleges and the sex of students living in campus housing was inconclusive.

An analysis of graduation rates, the number of students who complete an Associate’s Degree, revealed that community colleges with campus housing had significantly higher graduation rates than community colleges without campus housing, which may indicate a relationship between first-year student graduation rates and living on campus. Also, the data analysis indicated that women graduate at significantly higher rates than men, which may imply that women who live on campus graduate at higher rates than women who live off campus. This finding is also consistent with other retention research which states that higher graduation and persistence rates are associated with living in campus housing (Tinto, 1993; Pascarella & Terenzini, 2005).

**Overall Summary and Implications**

Some of the problems that arose in searching for and analyzing this data included the sole reliance on the IPEDS database from which to extract data. Retention data are not separated by race, sex, or age in IPEDS, which could have been helpful in identifying any differences in retention rates with regard to the variables analyzed in this research. Also, first-time, full time retention data does not separate degree- and certificate-seeking students, which may be a reason for retention rates being higher for community colleges without campus housing, as certificate-seeking students usually leave community colleges after just one year upon completing their certificate. Another issue that arose from solely utilizing IPEDS data was the lack of information available to be extracted that deals with institutional practices to improve retention or various facets of community college student experiences. This information could have been helpful in identifying
more specific policies or experiences that relate to first-year student retention at community colleges with campus housing. Finally, there was simply a lack of existing research and literature on this topic from which to draw for this study.

Some unexpected outcomes emerged from this study. One was the retention rates of both samples of community colleges analyzed in this research. The retention rates for community colleges without campus housing were significantly higher than those of community colleges with campus housing, a finding contrary to similar research on student retention at four-year universities. Another unexpected outcome was the age of students that was revealed in the data analysis. Although most research states that community college students tended to be older and adult learners, this research revealed the largest groups of students to be 18-19 years old and 20-21 years old respectively and were larger than all other age groups combined. Finally, the data analysis also revealed graduation rates to be higher at community colleges with campus housing, a finding consistent with research based on traditional four-year institutions but not at two-year institutions mainly because of the lack of research on community college housing and its impact on student retention and persistence.

Some recommendations to assist community college administrators and researchers include creating a student retention plan specific to the needs and characteristics of its first-year students that live in campus housing; identifying factors that impact first-year student retention and persistence; establishing a retention goal and coordinating retention efforts with other offices on campus; and creating a database on students’ perceptions, experiences, involvement, needs, goals, and social networks in order to develop a complete picture of community college students, as existing research has elucidated that
living on campus promotes social integration, personal growth and development, and can lead to increased persistence (Pascarella & Terenzini, 2005).

This study yielded several themes and implications for both researchers and community college administrators. First, the review of the literature revealed the importance of the residential environment to student retention and persistence although research from studies at four-year institutions may or may not be directly applicable to two-year institutions. The importance of academic and social integration to first-year student retention, concepts that are based primarily on traditional-age students at four-year institutions, have yet to be studied in a more meaningful way as to their application to residential community colleges. One reason may be the unique characteristics of community college students compared with traditional four-year college students. “The specific impact of these characteristics on community college student retention needs to be further assessed” (Fike & Fike, p. 4, 2008). The review of the literature also made it clear that there is little to no research that specifically examines any relationship between first-year student retention and public, two-year community colleges and living in campus housing. Second, the data analysis indicated statistically significant differences for community colleges with campus housing with regard to age, financial aid, graduation rates, and retention rates. Community colleges with campus housing were significantly higher than community colleges without campus housing with regard to financial aid receive and graduation rates.

Do the student characteristics in this study have a relationship with first-year student retention and living in campus housing at public, two-year community colleges? There are numerous factors that put community college students at risk of not obtaining a
degree — age; full time status; financial aid received; full-time employment; campus involvement; goals; academic preparation; and socioeconomic status — factors which also differentiate community college students from traditional, four-year college students. A study by Davids (2006) at one two-year institution of first-time, full-time freshmen revealed academic factors and full-time status to be the most important predictors of retention, and receiving financial aid was only one of several factors affecting student retention. Andreu (2002) completed a study that looked at potential variables known to relate to student retention at community colleges. She recommended studying the following list of variables:

- Gender; ethnicity; birth year; high school diploma; total amount of financial aid awarded; first-term amount of financial aid received; cumulative grade point average; dual enrollment; first-term enrollment status; first-term social integration; number of terms attended; number of major changes; number of advisor changes; number of remediation classes, and disability status. (p. 334)

Data on these variables are located in community college databases and, based on Tinto’s and Bean’s models, can be used when studying retention. With regard to this study, and based on the aforementioned research, the variables analyzed in this study — age, financial aid, graduation rates, race, race, and sex, race — are relevant to use in studying student retention at community colleges. A statistically significant relationship was shown to exist between financial aid received, graduation rates, and the retention of first-year students at public, two-year community colleges with campus housing. However, further study is needed to look more closely into any possible relationship between these variables and first-year student retention and living in campus housing. It is the hope of
this researcher that these recommendations and research will lead to the identification of promising areas of future research as well as recommendations for future study.

**Recommendations for Further Study**

This study raised new questions and illuminated several areas for further study. There have been no other studies examining the effect of living in campus housing on first-year student retention among community college students. Although the data used in this study seemed to show no advantage in student retention for community colleges with campus housing, further study of more detailed data may provide a clearer picture. Researchers should engage in both longitudinal and cross-sectional studies that would more fully explore any potential relationship between living in campus housing and the retention of first-year students.

Although the sample of community colleges without campus housing represented just 20.7% of all public, two-year community colleges in the United States, it would be interesting to observe how these results generalize to the remaining population of community colleges without campus housing not analyzed in this study. Replication of this study with that population would potentially add to the strength of the findings as well as this study’s generalizability. Also, given that first-year retention rates were higher at community colleges without campus housing, further research is needed in order to look more closely at this finding and determine whether it is generalizable to the other community colleges without campus housing not analyzed in this study.

As another follow-up study to this research, a mixed-methods study should be conducted that includes a survey of both quantitative and qualitative aspects in order to provide more descriptive and contextual information regarding the Chief Housing
Officer’s (CHO) perceptions and experiences as they relate to campus housing and first-year student retention at public two-year community colleges.

Additional research should be conducted in order to develop a more complete picture of community college students’ perceptions, experiences, goals, needs, levels of involvement, interactions with faculty, integration into campus social networks, satisfaction with the overall college experience, and the nature of their interactions with the institution, factors which can increase student retention and persistence rates. For students at four-year institutions, it has been shown that living on campus promotes social integration, personal growth and development, and can lead to increased persistence (Pascarella & Terenzini, 2005). Astin (1984) suggested that “the greater the student’s involvement in college, the greater will be the amount of student learning and personal growth” (p. 307), and student involvement leads to increased satisfaction with the college experience and increased retention. As Tinto (1993) stated, “the level to which students become academically and socially integrated into the institution’s systems could heavily influence his or her decision to remain at or leave the college” (Graybeal, 2007, p.24). A better understanding of this concept could result in two-year institutions identifying strategies and more purposeful experiences, specialized for community college students’ needs, which might increase the retention of first-year students. Academic and social integration information could best be gained through semi-structured focus groups and surveys of second-year students at community colleges who lived on campus during their first year of college. No database exists on student involvement in community college residence halls (Moeck, 2005).
Because of the characteristics that differentiate community college students from traditional college students — age, ethnicity, parental education levels, enrollment in developmental education, preparedness for college, and semester hours enrolled, to name just a few — community college researchers and administrators cannot assume that the retention theories and models used in gauging student retention at traditional, four-year institutions, nor the variables used in those models, will be effective at identifying community college retention strategies and solutions. “Retention must be re-defined from the traditional definition of program completion when dealing with adult students. Degree completion is the goal for some but not all adult students” (“Student Retention,” 2006). Community colleges need to develop their own definitions and models of student retention separate from those used by traditional, four-year universities. Bailey and Alfonso (2005) found that the usefulness of Tinto’s theory to explain student departure at community colleges remains undetermined. Given the variations and nuances of the community college environment and its students, a more comprehensive understanding of how student retention is defined and measured is needed. Given the differences in community college students, community college environments, and the issues facing community college students, a definition and research model unique to both is required to more effectively address the low retention rates at community colleges across the United States.

The major variables of this study were campus housing and the retention of first-year students. In addition, other variables such as age, financial aid, gender, graduation rates, race, and sex were analyzed in this study and may be related to differences in the retention rates of community colleges with and without campus housing. These student
characteristics and others need a more in-depth exploration to determine any impact or relationship they may have with regard to first-year student retention.

Another area that needs further research and attention at two-year institutions is the campus housing experience. Student housing and its possible effects on student retention and the integration of students into the community college needs to become a more prominent part of community college retention research and discussions in order to study this population and issue in a more purposeful way; this is where the gap in the research exists. Astin (1984) stated that:

Students living on campus are more likely to interact with other students, have a greater opportunity to become involved in campus life, and are more likely to persist and be satisfied with their college experience…Living on campus substantially increases the student’s chances of persisting and of aspiring to a graduate or professional degree. Living in a campus residence was positively related to retention, and this positive effect occurred in all types of institutions and among all types of students regardless of sex, race, ability, or family background…It is obvious that students who live in residence halls have more time and opportunity to get involved in all aspects of campus life. (p. 523)

Community colleges are places where the involvement of students seems to be minimal at most, and residential institutions have the ability to program opportunities for student involvement (Atkinson, 2008). As community college students are mostly commuters, a larger proportion attend college on a part-time basis, work full-time, and are less involved. Involvement is central to the integration and persistence of students, and campus housing provides opportunities for students to be more involved and integrated
into campus life (Astin, 1993; Pascarella & Terenzini, 2005; Tinto, 1993). More and better data are needed in order to more effectively measure the practices and strategies of public, two-year community colleges with campus housing and more closely study the relationship between living on campus and the retention of first-year students at community colleges across the United States.

With the announcement in 2012 of President Obama’s $12 billion initiative to improve community college success and graduation rates, this increased attention and focus on community colleges could also include more studies on campus housing as it relates to increased retention rates and the needs of this student population. As Moeck (2005) states, “a more exhaustive study should be performed focusing on the needs of residential students” (p. 118).

**Summary**

Given the low retention rates at most community colleges, the complexities of the community college environment, as well as the limited amount of research on the effects of campus housing on first-year student retention at community colleges, a paradigm shift must occur within community college retention research and discussions. Relevant models of student retention research and indicators unique to public, two-year community colleges, need further and ongoing study, and part of these efforts should begin by assessing any possible relationship between living in campus housing and first-year student retention, a factor that has received little to no attention in community college retention research.

Community college students face a host of challenges as they try to complete their degrees. As student retention continues to be a challenge for community colleges, it is the
hope of this researcher that the information revealed in this study will open a conversation that will lead to increased assessment efforts of campus housing retention initiatives and, subsequently, an increased research emphasis on the connection or relationship between living on campus and the retention of first-year students at public, two-year community colleges in the United States.

Though it has been documented earlier that it has been a problem for community colleges to identify variables related to retention and develop a retention model appropriate for community college research (Andreu, 2002), it is the conclusion of this researcher that any attempts to increase the retention rates of first-year students at community colleges must start by identifying retention variables and models in order to alleviate the costs and consequences of the low retention rates plaguing community colleges across the United States.

Many aspects of the community college environment may affect the retention and persistence of first-year students: admission; recruitment; financial aid; orientation programs; classroom instruction; peer support systems; learning communities; co-curricular activities and programs; and facilities. Community colleges should begin to look toward establishing retention goals and work with offices across campus to both create and coordinate retention efforts. A survey by ACT (2010) stated that 52.5% of community colleges do not have a specific retention goal and 15.4% do not know if their community college has a retention goal. Two-year institutions need information that is empirically grounded and specified in benchmarks for comparisons across peer institutions to more purposefully address and resolve the problem of low student retention.
As the number of undergraduates in the United States attending community colleges continues to grow, and with first year retention rates holding at just over 55%, two-year institutions with campus housing should make it a priority to develop more purposeful practices and initiatives designed to meet and assess the needs of this student population and view it as a potential avenue for improving first-year student retention if public, two-year community colleges within the United States are to retain their students more effectively.
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## APPENDIX A: T-TEST RESULTS

Table A1

*T-test Results of Age Differences.*

<table>
<thead>
<tr>
<th>Provides Housing</th>
<th>N</th>
<th>Mean Differences</th>
<th>Sig. (2-tailed)</th>
<th>T-test for Equality of Means (t)</th>
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<tbody>
<tr>
<td>1=Yes; 2=No</td>
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<td></td>
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<tr>
<td>Full time total (2011 Undergraduate Age under 18)</td>
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<td>50.95</td>
<td>.025</td>
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<tr>
<td></td>
<td>2</td>
<td>212</td>
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<tr>
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<td>822.06</td>
<td>.221</td>
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<tr>
<td></td>
<td>2</td>
<td>221</td>
<td>933.11</td>
<td></td>
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<tr>
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<td>460.03</td>
<td>.007</td>
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<tr>
<td></td>
<td>2</td>
<td>223</td>
<td>619.00</td>
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<td>2</td>
<td>223</td>
<td>394.15</td>
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<td>.000</td>
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<tr>
<td></td>
<td>2</td>
<td>223</td>
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<td>.001</td>
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<td>2009 Undergraduate</td>
<td>2008 Undergraduate</td>
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Full time total (2008 Undergraduate Age 20-21) 1 146 413.95 .000 -3.929
Full time total (2008 Undergraduate Age 22-24) 2 166 684.91 .000 -4.524
Full time total (2008 Undergraduate Age 25-29) 1 146 204.19 .000 -4.321
Full time total (2008 Undergraduate Age 30-34) 2 166 387.73 .000 -4.243
Full time total (2008 Undergraduate Age 35-39) 1 146 91.26 .000 -4.264
Full time total (2008 Undergraduate Age 40-49) 2 166 148.83 .000 -4.201
Full time total (2008 Undergraduate Age 50-64) 1 145 60.79 .000 -4.396
Full time total (2008 Undergraduate Age 65 and over) 2 166 97.29 .000 -4.211
Full time total (2008 Undergraduate Age unknown) 2 73 4.74 .000 -4.085
Full time total (2007 Undergraduate Age under 18) 1 220 45.90 .061 -1.880
Full time total (2007 Undergraduate Age 18-19) 2 207 64.35 .035 -2.111
Full time total (2007 Undergraduate Age 20-21) 1 224 734.96 .002 -3.188
Full time total (2007 Undergraduate Age 22-24) 2 220 191.54 .000 -4.339
Full time total (2007 Undergraduate Age 25-29) 1 221 156.22 .000 -4.185
Full time total (2007 Undergraduate Age 30-34) 2 220 245.39 .000 -4.065
Full time total (2007 Undergraduate Age 35-39) 1 222 84.49 .000 -4.085
Full time total (2007 Undergraduate Age 40-49) 2 220 125.66 .000 -4.338
Full time total (2007 Undergraduate Age 50-64) 1 220 56.10 .000 -4.380
Full time total (2007 Undergraduate Age 65 and over) 2 197 .93 .039 -2.069
Table A2

T-test Results of Race Differences.

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Table A3

*T-test Results of Sex Differences.*

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APPENDIX B: INSTITUTIONAL REVIEW BOARD APPROVAL

November 15, 2012

John F. Yaun
Director, Housing and Residence Life
Marshall University
Huntington, West Virginia 25755

Dear Mr. Yaun:

This letter is in response to the submitted abstract to determine whether a relationship exists between the retention of first-year students in public, accredited two-year community colleges in the United States and living in campus housing vs. commuting/living off-campus. After assessing the abstract it has been deemed not to be human subject research and therefore exempt from oversight of the Marshall University Institutional Review Board (IRB). The Code of Federal Regulations (45CFR46) has set forth the criteria utilized in making this determination. Since the information in this study consists solely of publicly available data from the IPEDS database it is not human subject research and therefore not subject to Common Rule oversight. If there are any changes to the abstract you provided then you will need to resubmit that information for review and determination.

I appreciate your willingness to submit the abstract for determination. Please feel free to contact the Office of Research Integrity if you have any questions regarding future protocols that may require IRB review.

Sincerely

Bruce F. Day, Th.D., CIP
Director
Office of Research Integrity
CURRICULUM VITAE
JOHN YAUN

EDUCATION
Marshall University
   Doctor of Education in Educational Leadership, 2013
Louisiana State University
   Master of Arts in Humanities, 1997
   Bachelor of Arts in Political Science, 1992

PROFESSIONAL EXPERIENCE
2009-Present  Director, Department of Housing and Residence Life, Marshall University, Huntington, West Virginia
               Instructor, Department of Political Science, Marshall University, Huntington, WV

2007-2009  Senior Associate Director of Residence Life & Staff Development, University of Miami, Coral Gables, FL

2005-2007  Assistant Director of Living Learning Programs, Louisiana State University, Baton Rouge, La

1999-2005  Residence Director, University of Massachusetts Amherst, Amherst, MA
               Instructor, Department of Judaic Studies, University of Massachusetts Amherst, Amherst, MA

PUBLICATIONS
- ‘Career Services: What Housing and Residence Life Programs Can Do to Support this Important Student Asset.’ SYNERGY Magazine, NASPA, December 2011
- ‘Social Media in LLCs.’ SYNERGY Magazine, NASPA, February 2011
- ‘Sustainable Living at Marshall University’ COLLEGE Planning, October 2010
- ‘Into the FYRE: The First Year Residential Experience at the University of Miami.’ Talking Stick, February, 2010

UNIVERSITY TEACHING EXPERIENCES
2009-Present  Marshall University, Huntington, West Virginia
               Instructor, Department of Political Science

2005-2007  Louisiana State University, Baton Rouge, La
              Instructor, Department of Religious Studies

2001-2004  University of Massachusetts Amherst, Amherst, MA
              Instructor, Department of Judaic Studies

1998-1999  Texas State University, San Marcos, TX
              Instructor, Department of Residence Life