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Exploring differences in level of involvement, educational outcomes, and satisfaction of resident students and commuter students at a rural community college

Richard Wayne Layman
West Virginia University

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**EXPLORING DIFFERENCES IN LEVEL OF INVOLVEMENT,
EDUCATIONAL OUTCOMES, AND SATISFACTION
OF RESIDENT STUDENTS AND COMMUTER STUDENTS
AT A RURAL COMMUNITY COLLEGE**

Richard Wayne Layman

**Dissertation submitted to the
College of Human Resources and Education
at West Virginia University
in partial fulfillment of the requirements
for the degree of**

**Doctor of Education
in
Higher Education Leadership**

**Elizabeth Jones, Ph.D., Chair
Richard Hartnett, Ed.D.
Ernest Goeres, Ph.D.
Richard Walls, Ph.D.
Terance Rephann, Ph.D.**

**Morgantown, West Virginia
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**Keywords: Resident Student, Commuter Student, Involvement, and
Community College Student Experiences Questionnaire (CCSEQ)**

ABSTRACT

Exploring Differences in Level of Involvement, Educational Outcomes, and Satisfaction Of Resident Students and Commuter Students at a Rural Community College

Richard Wayne Layman

Because the vast majority of community colleges were founded to serve commuter students who live within a local and regional area, student residential housing at two-year institutions has been seen as unnecessary. However, an increasing number of community colleges are opening student resident housing. In contrast to all the research available about the impact at four-year institutions of residence (resident students and commuter students), the literature review revealed there has been little research on resident students and commuter students on community college campuses (Murrell, 1998).

This study can be characterized 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. The *Community College Student Experiences Questionnaire (CCSEQ)* (Pace, Murrell, Friedlander, & Lehman, 1999) was used to measure the diverse characteristics, goals, external responsibilities, college environment, and desired outcomes of the community college students at this institution. Descriptive statistics, Multivariate Analysis of Variance (MANOVA), and *t*-test of independent means were used to analyze the data.

Results from this study indicated that statistically significant differences between resident and commuter students existed in all three aspects (involvement in college activities, estimates of gains or progress towards educational goals, and student satisfaction with the college environment) of this study. As anticipated, resident students had higher levels of involvement in college activities than commuters. A finding in this study was the number of community college students who "never" or only "occasionally" participated in many of the college activities. The means for both groups – resident students and commuter students – indicated a low level of involvement in selected activities. An unexpected finding was that commuter students perceived that they have made more progress towards their career goals than resident students. Additionally, commuter students reported higher levels of satisfaction with the college environment than resident students. Based on previous studies, the researcher expected residence students to perceive that they were progressing towards educational goals and they were satisfied at higher levels than commuter students.

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.

CHAPTER ONE

Introduction

Problem Statement

The vast majority of community colleges were founded to serve commuter students who live within a local or regional area. Faculty at two-year institutions generally design their programs, services, resources, and environment to meet the needs of these students, providing opportunities for commuter students to increase their involvement to assist them in reaching educational goals and objectives. Faculty and staff at community colleges have been concerned with meeting the needs of commuter students and creating a positive campus environment for these students.

However, an increasing number of community colleges are building on-campus student residential facilities. Prior to the late 1990's, only a few community colleges had on-campus student housing. Now, an increasing number of two-year colleges have either built or are planning to build student residential facilities. According to David Pierce, president of the American Association of Community Colleges, only 60 of the nation's 1,200 community colleges have on-campus housing (Lords, 1999).

Because most community colleges serve commuter students, campus housing has generally been seen as unnecessary. But community colleges are aiming for a higher profile or becoming more competitive, and finding themselves embroiled in the same competition with each other for students that four-year institutions have confronted for years (Lords, 1999). Thus, the community colleges see student housing as vital to recruit and accommodate students from far away. Student on-campus housing may be attractive to prospective community college

students. Campuses with student housing will serve a new population of students known as resident students—students who live in on-campus housing.

According to DiGiorgio, student housing 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” (DiGiorgio qtd. in Lords, 1999, p. 609). DiGiorgio noted three reasons that community colleges are building student residential facilities: (1) demand for housing is increasing in community colleges enrolling more students who might have otherwise gone to four-year institutions, (2) a dormitory can be crucial when recruiting international students, athletes, and people from distant locales, and (3) in some cases, the start-up costs associated with campus housing are nominal because private developers are willing to build and manage student housing (Lords, 1999, p. 609).

Student residential housing has the potential for making significant contributions to the learning and development of community college students. *The Student Learning Imperative (SLI)* (American College Personnel Association, 1994) 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, p. 1). One way out-of-class experiences have been successfully linked with in-class experiences is through programs and activities within residence halls. However, research showing how the *SLI*’s call for integration of experiences has been successfully achieved through residential programs has been conducted almost exclusively at four-year institutions.

Pike, Schroeder, and Berry (1997) contend, “residence halls represent a potentially important venue for improving undergraduate education because...of students living in residence halls and the extended opportunities to influence those students” (p. 610). Pike (1999) and Pike et al. (1997) completed research on integrating diverse curricular and cocurricular experiences. These studies provide indirect evidence of the importance of student involvement. In both studies, the researchers found relationships between students’ in-class and out-of-class experiences. Also, the researchers found that both in-class and out-of-class experiences were related to students’ reports of their learning and development.

Student residential housing has historically served as major sources of growth and development opportunities for college students. Campus housing provides a locale for bringing together many of the experiences that lead to gains in student educational outcomes and development. Chickering (1974) found that students living in residence halls reported higher gains in personal and social development, but, again, his conclusion was based on research at four-year schools. Research has indicated that, compared to commuter students, resident students have significantly higher levels of involvement in activities outside of class (Chickering, 1974; Astin, 1973, 1977). Pike et al. (1997) provided evidence in support of these earlier works that indicates resident students have significantly higher levels of interaction with faculty and peers, satisfaction and institutional commitment, and persistence than commuter students. Pascarella and Terenzini (1991) cited the beneficial influence of living in student housing, both as a direct result of the experience there as well as the indirect interpersonal relationships fostered outside the residence halls. However, living in on-campus student housing does not guarantee these successes. Pike et al. (1997) assert that in order to “contribute significantly to

student success, student residential environments must be structured to reinforce classroom learning and to enhance students' commitment to college" (p. 610).

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 colleges campuses (Murrell, 1998). Similarly, the research on commuter students is limited in quantity and breadth (Jacoby, 1989). There is little known about the similarity and differences of community college students' resident and commuter experiences. Despite the differences in their backgrounds and educational goals as a group, resident students share a common core of needs and concerns. Likewise, commuter students share a common core of needs and concerns (Jacoby, 1989). The studies conducted on four-year colleges and university campuses have found differences between resident students and commuter students in terms of levels of involvement in activities, educational outcomes, and satisfaction (Jacoby, 1989). Community colleges need to conduct similar comparison studies of these two groups of students to see how the experiences of the resident students and commuter students are the same or different within two-year institutions.

Research suggests that the more time and effort students invest in the learning process and the more intensely they engage in their own education, the greater will be their growth, achievement, and satisfaction with the college experience and their persistence toward educational goals (Jacoby, 1989). Pace defines the investment of time and effort in college students' studies as "Quality of Effort" (1982). Pace believes students must take advantage of all that the college has to offer. Pace's concept of "Quality of Effort" is based on theory by Astin (1984) about how colleges can promote student learning and growth, which will be presented in the literature review. This concept of student involvement holds that a high quality institution is

one that “facilitates maximum growth among its students and faculty and that can document that growth through appropriate assessment procedures” (Astin, 1985, p. 77). Jacoby (1989) comments that “Many commuter students cannot become involved in the same ways that traditional-age, residential students can” (p. 38). In her study, Jacoby cites the need for more research on the application of involvement theory to the commuter students’ college experience, as well as the resident students’ experience.

Purpose of Study

The purpose of this research study was to investigate whether resident students’ and commuter students’ reported levels of involvement in activities, achievement of educational goals, and satisfaction with the educational experience are the same or different at one community college. Homestead Community College (fictitious name) have contracted with the nation’s largest owner and manager of student off-campus housing to develop and manage an on-campus student housing complex beginning in the fall of 2001. This student housing project was the private developer’s first endeavor on a two-year community college campus.

This study compared information about two groups of students—resident and commuter—to see if the experiences of those groups are the same or different. To evaluate whether commuter students’ and resident students’ educational goals and needs were being met, the institution must acquire information about its students; its programs, services, activities, and environment; and the nature of students’ interactions with the institution (Jacoby, 1989). Homestead Community College (HCC) needs to examine whether both groups of students benefit equitably from the institution’s offerings. This study examined three aspects from the perspective of the student-as-commuter and student-as-resident: (1) students’ reported levels of involvement in a variety of activities related to the use of campus facilities and other

opportunities to increase their academic and personal development; (2) students' reports of how much they have gained or progressed towards their educational goals; and (3) students' reported levels of satisfaction with the college environment. Results from the research questions provided comprehensive data about HCC's students and their experiences with the institution. This study provided crucial information to assess whether the institution's programs, services, facilities, activities, and resources address the needs of both resident students and commuter students equitably.

Research Questions

1. Is there a statistically significant difference between resident students (students who live in on-campus apartments) and commuter students (students who do not live in on-campus apartments) in terms of their reported levels of involvement in college activities?

Eight Areas of Activities comprising the "Quality of Effort" Scales:

- Course Activities (CLASS 1 – 10)
- Library Activities (LIB 1 – 7)
- Faculty (FAC 1 – 9)
- Student Acquaintances (ST ACQ 1 – 6)
- Art, Music, Theatre Activities (AMT 1 – 9)
- Writing Activities (WRITE 1 – 8)
- Science Activities (SCI 1 – 11)
- Computer Technology (COMP 1 – 8)

Five Additional Areas of College Activities (not considered part of the "Quality of Effort" dimension):

- Career/Occupational Skills (OCC 1 – 9)
- Learning and Study Skills (LSS 1 – 9)
- Athletic Activities (ATH 1 – 6)
- Clubs and Organizations (ORG 1 – 7)
- Counseling and Career Planning (CCP 1 – 8)

2. Is there a statistically significant difference between resident students and commuter students in terms of their perception of estimate of gains or progress towards educational goals?

Six Item Groupings comprising the “Estimate of Gains” Scales:

- Career (CAR 1 – 4)
- Arts and Communication (AC 5 – 8)
- Computers (COMP 9 – 10)
- Personal & Social Development (PSD 11, 12, 13, 23, 25)
- Mathematics, Science, & Integrated Technology (MSI 14, 15, 16, 17, 19)
- Perspectives of the World (PW 18, 20, 21, 22)

Question 24 (not considered part of “Estimate of Gain” Scales)

3. Is there a statistically significant difference between resident students and commuter students in terms of their reported levels of satisfaction with the college environment?

Five items comprising the “Satisfaction” Scale:

- Students (ENV 2)
- Instructors (ENV 3)
- Support Staff (ENV 4)
- Courses (ENV 5)
- College as a Whole (ENV 6)

Questions ENV 1, 7, 8 (not considered part of “Satisfaction” Scale)

Organization of the Dissertation

The remaining chapters of this proposal consist of the review of the literature section, method section, results, and conclusions. The literature review, Chapter Two, is comprised of three major sections. The first section develops a conceptual framework for understanding the impact of college on the student. Within this section, Astin’s theory of student involvement and the person environment interaction framework discusses the role of involvement and interaction of the students and its impact on student development. A discussion of Pace’s “Quality of Effort” theory follows as a companion to Astin’s theory of student involvement. This segment discusses Pace’s *College Student Experiences Questionnaire* (CSEQ, 1992), that was

subsequently revised by Pace and Kuh (1998). The *CSEQ* was developed from Astin's and Pace's theories. The second section discusses and reviews research on residence (resident students and commuter students at four-year and two-year institutions) and its impact on college experiences, educational goals, and satisfaction. The final section defines key terms and concepts as revealed in the literature. Chapter Three provides and describes the rationale for selecting the research design, as well as the strengths and limitations of the study. This section explains the methodological decisions for the study, including site selection, sampling procedure, strategy for attaining participant cooperation and institutional approval, data collection and analysis, assurance of data trustworthiness, the researcher's background, and the research timeframe. Following Chapter Three, a brief conclusion will reiterate the study's potential contributions to the field, purpose, and major procedures. Chapter Four details the data analysis procedures and reports the results. Chapter Five interprets the results in light of current literature and discusses the implications for practice and future research. The survey instrument and cover letters seeking approval and participation are attached to the dissertation as appendices.

CHAPTER TWO

Review of Literature

Introduction

The vast majority of research conducted on the impact of the college experience on students is based principally on four-year colleges and universities, and focuses on on-campus residency within these institutions. This research examines the influential role student residency plays on a variety of educational outcomes and development of undergraduates. Personal and social development, levels of involvement in activities outside the classroom, levels of interaction with faculty and peers, satisfaction and institutional commitment, and personal persistence of students are all outcomes assessed by major researchers (Astin, 1973,1977; Chickering, 1974; Pascarella and Terenzini, 1991; Pike, Schroeder, and Berry, 1997).

Through these studies, researchers have discovered differences between resident students and commuter students in areas such as degree of involvement in diverse activities, types of educational outcomes, and overall satisfaction with the college environment. Since the majority of studies have been conducted at four-year institutions, very little is known about such experiences at two-year institutions. With regard to the impact of community college experiences on students, Pascarella and Terenzini (1998) referred to the scarcity of literature as an “empirical black hole” and indicated, “We are functioning in virtual ignorance of the educational impact of one of the nation’s most significant social institutions” (p. 155). Thus, most of the studies in the literature review concentrate on the impact of the college experience at the four-year institutional level.

Relevant theories need to be examined that provide a conceptual framework for this study. The primary conceptual frameworks for this study are Astin’s (1984) theory of

involvement and Pace's (1984) "Quality of Effort" theory. These two theories are the most relevant to the constructs studied with the *Community College Student Experience Questionnaire* (CCSEQ) (Pace, Murrell, Friedlander & Lehman, 1999), the data collection instrument used in this study.

Other theorists will be identified as important in understanding the impact of college on the student. These college impact models focus on sources of change, such as institutional characteristics, programs and services, and student experiences (Pascarella & Terenzini, 1991). The college impact constructs provide the theoretical framework for the approach to assessment used in this study. Then, the CCSEQ, the instrument used for assessing the quality of undergraduate student experience and measuring the attainment of important educational goals and satisfaction with the college, was reviewed. The review of literature concludes with research findings on resident students and commuter students at four-year and two-year institutions.

Theories and Conceptual Models of College Impact

Some of the theories and models on traditional, resident students are transferable to work with other kinds of students including commuter students (Jacoby, 1989; Schlossberg, Lynch, and Chickering, 1989). Multiple theories are necessary to address the diversity of resident students and commuter students. To understand both student experiences and development in college and the nature of student interactions with the institution necessitates the use of a guiding framework drawn from the involvement principle and person-environment framework developed by Astin (1984).

Theory of Student Involvement

Astin's theory of involvement. Astin's theory of involvement focuses on the impact of students' experiences on their development during college. Astin theorizes that students'

learning and development is enhanced by involvement. The involvement principle states that the more time and energy students expend in educationally purposeful activities, the more they will benefit (Astin, 1984; Kuh, 1981; Pace, 1979a; Study Group, 1984). Astin's (1984) five postulates of involvement illustrate why time and energy are important to learning:

1. Involvement is the investment of physical and psychological energy in various activities. The activities may be quite general (e.g., the freshman year) or specific (e.g., preparing for a chemistry examination);
2. Involvement occurs along a continuum, in that different students exhibit different degrees of involvement in a given activity or task with the same student manifesting different degrees of involvement in different activities at different times;
3. Involvement has both quantitative and qualitative features. The extent of a student's involvement in academic work, for instance, can be measured quantitatively (e.g., hours devoted to studying) and qualitatively (e.g., whether the student reviews and comprehends reading assignments or simply stares at the textbook and daydreams);
4. The amount of educational benefit associated with any activity is directly proportional to the quality and quantity of a student's investment of time and energy; and
5. The effectiveness of any educational policy or practice is directly related to the capacity of that policy or practice to increase student involvement (p. 298).

Student involvement is the amount of physical and psychological energy that the student devotes to the academic experience. Astin (1984) identified differences between the highly involved student and the uninvolved student as follows:

Highly involved student:

- Devotes considerable energy to studying
- Spends much time on campus
- Participates actively in student organizations and extracurricular activities
- Interacts frequently with faculty and other students

Uninvolved student:

- Neglects studies
- Spends little time on campus
- Abstains from extracurricular activities
- Infrequent contact with faculty or other students (pp. 297-298).

Astin (1977) first conducted research on student involvement in 1961. As part of a national survey of first-time, full-time freshmen (at 248 undergraduate colleges and universities), undergraduates provided information about their personal characteristics, background, and

educational goals. This was a prototype for the Cooperative Institutional Research Program (*CIRP*), which began in 1966 under the direction of the American Council on Education. The *CIRP* data assisted in describing the impact of college on students, including personal, social, and vocational development, as well as how college experiences affected students differently. Astin also examined the importance of attending college away from home, working while attending school, and participating in extracurricular activities. Utilizing *CIRP* data from over two decades, Astin developed the Theory of Student Involvement. The theory states, “Student involvement refers to the amount of physical and psychological energy that the student devotes to the academic experience” (Astin, 1984, p. 297). The theory of student involvement also closely resembles what the learning theorists refer to as “vigilance” or “time-on-task.” Astin (1984) explains, “The concept of effort, although much narrower, has much in common with the concept of involvement” (p. 297). Astin intended for the term “involvement” to be an active term, connoting behaviors. Astin used the following verb forms to describe the concept of involvement: attach oneself to, commit oneself to, engage in, participate in, show enthusiasm for, take an interest in, undertake, and take part in. These terms are behavioral in nature, and while motivation is an essential part of involvement, Astin stresses that the behavioral aspects are the most critical. “It is not so much what the individual thinks or feels, but what the individual does, how he or she behaves, that defines and identifies involvement” (Astin, 1984, p. 298). Astin (1999) referred to the work of Pascarella and Terenzini (1991), which concluded that, the more the student becomes involved in the academic environment, the greater will be the learning and personal development of the student. Therefore, in order to achieve the desired student learning and development, programs and practices of the institution must elicit sufficient student effort and investment of energy to achieve the desired educational outcomes.

Student involvement theory suggests that students should be the focus of concern. For educators, the implication of the student involvement theory is to focus less on what they do and more on what the student does. Student motivation, and the time and energy students devote to the learning process should be the emphasis for higher education. The theory of student involvement focuses on behavioral processes that facilitate student development.

Astin believes that the most valuable institutional resource is student time, not the accumulation of fiscal resources. The theory recognizes that the psychological and physical time and energy of students are finite and limited. Thus, educators must compete with other student forces and interests for a share of this time and energy. Institutional practice and policy may affect the way students decide to spend their time, including the amount of effort the students put into their academic experiences. There are strategies that can be utilized to maximize student involvement on campus. The way the institution approaches other environmental factors such as student residence, employment on campus, financial aid and scholarships, recreational facilities, and so forth, could also significantly affect the way students decide to spend their time.

Astin's (1985) theory of student involvement is grounded in a longitudinal study of college dropouts. Astin's study was designed to identify college environmental factors that significantly influence students' persistence in college. Astin's work found that environmental and student involvement factors affecting students' persistence in college were directly related to the involvement concept. Astin (1985) stated, "Virtually every significant effect could be explained in terms of involvement" (p. 144). That is, certain aspects in the environment tended to increase student involvement in the undergraduate experience. For example, factors such as frequency of student-faculty interactions, amount of time students spend studying, and opportunities to collaboratively engage in educational activities tended to increase student

involvement. By contrast, certain activities tended to decrease involvement in the undergraduate experience. For example, working off-campus, spending no or little time on campus outside of class, and commuting to school tended to decrease student involvement. Astin asserted that the most pervasive factor was residing or living on campus. This factor “occurred in all types of institutions and among all types of students regardless of sex, race, ability, or family background” (p. 145). Astin (1999) found that students living on campus are provided more opportunities to interact with other students, which he describes as the “strongest single source of influence on cognitive and affective development...” (p. 590). For this reason, students who reside on campus have a greater opportunity to become involved in all aspects of campus life and are more likely to persist and be satisfied with their college experience. Other environmental factors found to increase student persistence were involvement in co-curricular activities, participation in intercollegiate athletics, enrollment in honors programs, ROTC, and involvement in professors’ research projects. In addition, Astin’s study addressed the concept of student with environment “fit” (known as Person-Environment Interaction Framework to be discussed later). Astin indicated that it is easier for students to become involved in the undergraduate experience when they can identify with the overall college environment.

The importance of involvement in learning and growing is emphasized in the Input-Environment-Output (I-E-O) model (see Figure 1). Astin (1977) developed the I-E-O model as a conceptual guide for studying college student development. While he refined the model, the three basic elements remain the same. *Inputs* refer to the characteristics of the student at the time of initial entry to the institution. These inputs include age, gender, race/ethnicity, high school grade point averages, and SAT/ACT scores. *Environment* refers to the various programs, policies, faculty, peers, and educational experiences to which the student is exposed. *Outcomes*

refers to the student's growth and development after exposure to the environment (Astin, 1993). These outcomes include college GPA, estimate of gains in or progress towards educational goals, satisfaction with the college environment, and persistence. The basic purpose of this model is to assess whether students change or develop differently under varying environmental conditions. Studying student development with the I-E-O model provides researchers and educators with a better basis for knowing how to achieve desired educational outcomes.

Figure 1. Astin's (1977) Input – Environment – Outcomes (I-E-O) Model

The *Community College Student Experiences Questionnaire* (Pace et. al, 1999) is an assessment tool used to study student development from the perspective of the I-E-O model. Banta et al. (1996) comments that assessment requires attention to outcomes but also equally to the experiences and environment that lead to those outcomes. The authors believe that to improve outcomes, educators need to know about student experience along the way – especially the kind of student effort that lead to particular outcomes. The authors state that “It would be of little value to gather information on student outcomes without gathering and utilizing the equally important information on the student experiences, classroom teaching techniques, and institutional and environmental conditions that lead to the outcomes” (p. 23). They suggest that undergraduate education could be improved through assessment and evaluation of student involvement, quality of effort, and student satisfaction with the environment. Furthermore, this information about student progress and experiences provides direction for planning, developing, implementing, and continuously improving student services, programs, and activities.

Person-Environment Interaction Frameworks. Astin articulated the concept of student with environment “fit” as an interaction process (1993). The person-environment interaction frameworks have conceptualized student behavior and development as functions of the person and of the actual and perceived environments (Jacoby, 1989). The person-environment theory, concerned with the interactions between students and the educational environment, “is the systematic coordination and integration of the total campus environment – the organization, the structures, the space, the functions, the people, and the relationships of each to all others and to the whole – toward growth and development” (Banning, 1980, p. 208). In other words, mutual shaping occurs between undergraduates and their environments. Thus, under certain conditions, it is possible to influence the outcomes associated with college attendance through environmental factors (Jacoby, 1989).

The following assumptions guide the person-environment interaction framework (ACPA, 1994):

1. Involvement/Talent Development/Integration (Astin, 1985) is the over-arching goal of undergraduate education;
2. The domains of learning and personal development are inextricably intertwined and overlap in some areas; each affects the other in myriad ways;
3. Both students and institutions contribute to student learning; that is, learning and personal development occur through transactions between students and their environments; and
4. Experiences in various in-class and out-of-class settings, both on-campus and off-campus, contribute to learning and personal development.

Other College Impact Theorists: Student Involvement. Similar to Astin’s work, Tinto (1975, 1987) developed a model of student interaction that described student involvement or interaction and its impact on student retention. Tinto hypothesized that students come to college with experiences and expectations that are subject to change during their enrollment. He believed that students are more likely to persist when their experiences and expectations are

aligned with the campus environment and when their interactions with others are positive. He argued that students for whom this is not the case are more likely to drop out. Tinto concludes that the degree of students' involvement with and integration into the academic and social environment will dictate their educational commitment and persistence.

Although Tinto focused on the college attrition process, his model was implemented to investigate other student outcomes such as students' reports of academic skills acquisition, personal change, and progress towards educational goals (Terenzini & Wright, 1987). The integration of students into the academic and social systems of an institution – the underlying dynamic of Tinto's theory of departure – parallels Astin's concept of "involvement."

Pascarella and Terenzini (1991) described Astin's Theory of Involvement and the Person-Environment Interaction framework as "impact models," which emphasized student interactions with the environment. Pascarella and Terenzini reported that "One of the most inescapable and unequivocal conclusions we can make is that the impact of college is largely determined by the individual's quality of effort and level of involvement in both academic and nonacademic activities" (p. 610). They believe educators can help students become more fully engaged in their college experience by creating environments that provide experiences and activities that promote involvement and interaction. Pascarella developed a model to assess the impact of college on student outcomes based upon Tinto's work and Pace's concept of quality of effort.

Tinto's theory, along with Pace's (1979, 1984) work, directed Pascarella (1985) to propose a more general impact model that applied to more criteria than retention and included two classes of variables missing from Tinto's model – institutional characteristics and the level of student effort (Davis & Murrell, 1993). Pascarella proposed that growth is a function of the

direct and indirect effects of five major sets of variables and thus necessitated the inclusion of these two additional variables.

The first sets of variables focus on the student's background and pre-college characteristics. The second set of variables emphasizes the residential features of the institution. These two initial sets of variables help to form the third variable of the overall college or university's environment for a given student. The frequency and content of student interaction with other students and the faculty make up the fourth set of variables, which, in turn, is largely shaped by the first three variables. These first four factors largely influence the fifth, quality of effort. The inclusion of the third (overall college environment) and the fifth variable (quality of effort) sets helped differentiate this model from Tinto's theory (Terenzini, 1987).

Quality of effort, the fifth constellation of variables, is shaped by students' background traits, by the general institutional environment, and by the normative influences of peers and faculty members. Students' changes are seen as a function of students' background characteristics, interactions with major socializing agents, and the quality of the students' efforts in learning and developing. The structural features of the institution are believed to have an indirect, rather than direct, influence on students and their development, being mediated through the institution's general environment, the quality of students' effort, and students' interactions with peers and faculty members (Terenzini, 1987, p. 27).

The key change in Pascarella's (1984, 1985) theoretical model is the concept of student effort. Also, this model incorporates the concept of student involvement that Astin (1977, 1984) presented. Davis and Murrell (1993) summarized the evidence on "involvement" by stating, "Student-faculty interaction and academic integration exert a direct and important effect on persistence, intellectual and academic outcomes, and institutional loyalty. Peer relations appear

to be important in enhancing persistence and personal development” (p. 58). Davis and Murrell called for greater student responsibility by which undergraduates were motivated to make the most of their college education. Research by Kuh, Schuh, and Whitt (1991) has showed that both institutional environment and climate play a significant role in assessing whether students are involved positively with their college. They suggested that institutions have both the power and responsibility to promote an environment that includes activities and experiences designed to promote involvement.

Pace’s “Quality of Effort” Theory. Pace’s (1979a, 1984) “Quality of Effort” theory was an instructive and useful companion to Astin’s theory of involvement. Attending college has long been associated with growth and development in academic and social objectives (Pascarella & Terenzini, 1991), but Pace’s theory added the notion that what students gain from college is largely established by the amount of effort they exert toward their education. Research supported the hypothesis that the level of student involvement was a major, if not the most important, factor influencing what students gain from college (Astin, 1984; Pace, 1984; Pascarella & Terenzini, 1991). Pace stated that the quality of outcomes is proportional to the quality of effort students invest in academic and social activities. Pace (1982) defined “Quality of Effort” as the investment of time and effort in college students’ studies. Murrell and Davis (1993) related their concept of student responsibility to quality of effort in the following way: “Student responsibility means quality of effort, and responsible student behavior is defined by the amount of time a student devotes to high-quality encounters with faculty and peers in and out-of-class” (p.12).

By examining not only the quantity but also the quality of student involvement both in and out of the classroom, Pace’s (1979a, 1984) theory complemented other student involvement

theories (e.g., Astin, 1984; Tinto, 1975, 1987). Pace (1979a) argued that although institutions may provide opportunities for students to participate in wide variety of college events and activities, the students' efforts, initiative, and responsibilities determine to what extent they become involved in those events and experiences. Pace (1984) theorized that the nature of college experiences and events that influence outcomes are associated with the psychological climate—student perceptions of the institutional environment and willingness to participate in out-of-class experiences.

Pace (1979a, 1984, 1992) defined out-of-class experiences as all activities in which students engage during undergraduate study that are either directly or indirectly related to their learning and performance and occur beyond the formal classroom or laboratory setting. Such activities include, but are not limited to, studying in the library, interacting with peers and faculty, participating in organized campus-based events and activities, working on-campus or off-campus, and using other resources that colleges provide for learning and development whether human (instructors, advisers, administrators) or physical (libraries, computer labs, residences).

Pace (1979a, 1984) drew upon the work of Astin, Tinto, and Pascarella in developing his model (see figure 2). Pace identified the importance of student involvement and quality of effort in academic and social activities that impact student educational outcomes and success. Pace's model follows student development from entrance to exit to determine the impact of college on the student.

When undergraduates first enter college, they start with certain levels of knowledge, critical thinking skills, interests, values, and other personal traits that make up measurable criteria. These criterion measures at entrance into college are factors that can be assessed when a

student exits the college. Student development can be measured by differences between criterion scores at entrance and exit. Students' level of knowledge and critical thinking skills are criterion measures because they may be influenced and changed through students' college experiences, quality of effort, and the college environment. Additional criterion measures include students' self-report of gains or progress towards educational goals and satisfaction with the college environment. Factors such as age, gender, race, ethnicity, and socioeconomic status are not considered criterion measures.

The central feature of Pace's model, which accounts for college student development and learning, depends on the quality of effort that students invest in their college experiences. The college experiences and events include taking advantage of the physical accommodations that the college offers as well as the opportunities for participation in the academic and social life of the institution. The extent to which students invest high quality of effort is marked by the time and depth of commitment students give to the college experience (Pace, 1982).

Pace's (1979a, p. 126) model is illustrated below (see Figure 2).

Figure 2. Pace's (1979a) Path for a Student Development and College Impress Model (p. 126).

Based upon college impact theories and his own research, Pace developed the *College Student Experiences Questionnaire (CSEQ)* (1979b). The *CSEQ* is an instrument designed to determine how students spend their time and measures gains in learning that students believe they have achieved by attending college. Pace (1988) commented that “the intellectual origins of this instrument come from a variety of views and concepts about the nature of higher education, about accountability, about student learning and development, and about the need for new measures in the evaluation of higher education programs” (p. 4). Pace viewed education as both a product and a process. However, educators often view education as a product in terms of knowledge acquired, improved skills, modified values, test scores, and grades. Pace commented that educators who only look at the product often fail to examine the processes that generate the product. Pace believed that both educational products and processes need to be measured and that the amount, scope, and quality of effort are the keys to an effective process. A basic premise of Pace’s instrument and research is summarized in this statement: “All learning and development require an investment of time and effort by the student. Time is a frequency dimension. Effort is quality dimension in the sense that some educational processes require more effort than others” (Pace, 1982, p. 4).

Pace used his model for the basis of the *CSEQ* instrument. Student development and learning requires time and effort on the part of students. The instrument measured the amount, scope, and quality of effort, with respect to student involvement in the opportunities made available at colleges and universities, that influence student outcomes. Amount of effort referred to how often students participate in an activity. The scope of effort relates to students’ participation in a variety of activities. This scope or breadth of activities was believed to

broaden student development. Quality of effort refers to the range of students' effort ranging from simple to complex (Pace, 1988).

Pace's (1988) *CSEQ* measures quality of effort, estimate of gains in educational outcomes, and student satisfaction. "Quality of Effort" was measured by how often, during an academic year, students engage in various activities or opportunities inherent in the college experience. Pace developed 14 scales to measure involvement. Each scale had a hierarchical checklist, which required that the higher quality of effort, or most difficult activities, subsumed engagement in the lower quality of effort, or easier activities. The scales were scholarly/intellectual activities (library experiences, experiences with faculty, course learning, experiences in writing), informal/interpersonal activities (art, music, and theater; personal experiences, student acquaintances, conversation topics, and information in conversations), use of group facilities (student union, athletic and recreational facilities, clubs and organizations, campus residence), and science activities (science/technology). Across these scales, students are asked to rate their involvement as: very often, often, occasionally, and never.

Another section of the *CSEQ* is the "Estimate of Gains" section. This section consists of students' evaluation of their progress toward 23 important educational goals. The goals were grouped into the following five clusters: (1) personal development and social competence, (2) science and technology, (3) general education, literature, and art, (4) intellectual skills, and (5) vocation training (Pace, 1988).

The last section of the *CSEQ* allows students to have an opportunity to evaluate the college environment. Students are provided an opportunity to assess institutional characteristics such as academic or intellectual qualities; aesthetic, expressive or creative qualities; emphasis on being critical, evaluative or analytical; emphasis on development of vocational and occupational

competence; and emphasis on the personal relevance and practical value of courses. In addition, students evaluated relationships with other students, faculty members, and administrative personnel.

Since the *CSEQ* was first introduced in 1979, it has become a widely used instrument and research tool to measure students' quality of effort, gains in educational outcomes, and satisfaction. Research results indicated that quality of effort is a concept whose value is predictive, diagnostic, and pervasive in understanding student learning and development in a college environment (Pace, 1988).

The *Community College Student Experiences Questionnaire (CCSEQ)* (Pace, Murrell, Friedlander, & Lehman, 1999), which will be used in this study, is based on the Pace's *CSEQ*. Friedlander, Pace, and Lehman (1990) developed this instrument for community colleges. It was designed to measure the diverse characteristics, goals, external responsibilities, college environment, and desired outcomes of the community college students. This particular instrument will be discussed fully in the method section of this dissertation prospectus.

Research supported Pace's theory at both the community college (Glover & Murrell, 1998; Polizzi & Ethington, 1998; Smith, 1993) and four-year college and university level (Arnold, Kuh, Vesper, & Schuh, 1993; Martin, 2000). Using the *CSEQ*, Martin (2000) found that students' estimates of gains in educational outcomes could be explained by student efforts exerted toward peers, clubs and organizations, faculty member interactions, and information acquired through conversations. Glover and Murrell (1998) used the *CCSEQ* and found that quality of effort, regardless of student age and other background characteristics, predicted gains in both personal and social growth and general education. Polizzi and Ethington (1998) studied two-year vocational students and reported that quality of effort influenced gains in career

preparation. Smith (1993) reported that quality of efforts in arts, music, and theater; library activities; and transfer-related counseling predicted the number of courses completed by community college students.

The community college research studies add considerably to the growing literature on Pace's theory. However, little research exists that examines the similarities and differences in the experiences of resident students and commuter students as these measures influence various outcome measures and satisfaction (Inman & Pascarella, 1997).

Studies of Resident Students and Commuter Students

It is crucial to examine the research on resident students and commuter students in terms of their levels of involvement in activities, educational outcomes, and satisfaction. At this point, a definition of resident student and commuter student needs to be established to differentiate between the two terms. The literature defines resident students as all students who live in institution owned on-campus student housing and commuter students as all students who do not live in institution-owned housing (Stewart & Rue, 1983; National Clearinghouse for Commuter Programs, 1987).

Pascarella and Terenzini's (1991) conducted an extensive review of research studies and concluded that student learning and development are influenced by a variety of factors, including coursework, effort in studying, involvement in out-of-class activities and experiences, and interactions with faculty and peers. Pike (1999) found that both in-class and out-of-class experiences were related to students' reports concerning their learning and development. Pike stated that for student growth to continue, academic work that is done in the classroom must find expression in other aspects of students' lives outside the classroom, both academic and social. Welty (1976) confirmed that resident students gain more opportunity than commuter students to

engage in out-of-class experiences and activities. Significant experiences of the resident student included the “number of new student friendships formed the freshman year, the amount of student-faculty interactions, and the amount of interactions with administrators” (p. 468). Welty concluded that resident students have more opportunities than commuter students to engage in these relationships and suggested that institutions should develop programs and experiences for commuter students that would provide them with increased opportunities to interact with others and develop similar types of relationships (p. 468).

Astin (1996) stated that involvement is a “powerful means of enhancing almost all aspects of the undergraduate student’s cognitive and affective development. The three most potent forms of involvement for college students turn out to be academic involvement, involvement with faculty, and involvement with student peer groups” (p. 126). Astin (1999) stated that students living on-campus have more opportunities to interact with their peers, which he describes as the “strongest single source of influence on cognitive and affective development” (p. 509). Astin believed that peer groups have the ability to involve students more intensely in the educational experience.

This important determinant to the impact of college is “determined by the extent and content on one’s interactions with major agents of socialization on campus, namely faculty and student peers” (Pascarella & Terenzini, 1991, p. 620). Astin (1993) believed the differences in resident students and commuter students are more likely to be indirect influences through interactions that the students have with agents of socialization rather than direct influences. Astin believed that living on campus (versus commuting) had no significant, direct effects on outcomes. Rather, the influence of residence was indirect and mediated through the levels of involvement with faculty and peer students. Pascarella (1985) found no direct influence of

residence status on outcomes. He concluded that the positive influence of living on campus was indirect in that living in on-campus student housing had a significant positive, direct effect on the extent of students' interaction with faculty and peers.

Marchese (1994) argued that student residence represents a potentially powerful venue for integrating students' diverse curricular and co-curricular experiences. On-campus student residence provides a location for bringing together many of the experiences that lead to gains in student development and learning (Schroeder & Mable, 1994). Resident students spend a substantial amount of time in their living areas, and opportunities for interaction with peers and involvement in out-of-class activities abound. Research has indicated that, compared to commuter students who live off-campus, resident students had significantly higher levels of involvement in activities outside the classroom, interaction with faculty and peers, and overall satisfaction (Chickering, 1974; Pascarella & Terenzini, 1991).

Chickering and Kuper (1971) noted that student residence was usually overlooked as part of the educational process. Chickering and Kuper attempted to determine the effect of residence on student experience. Their study compared the educational outcomes for resident students and commuter students and discovered that resident students developed intellectually at higher rates than commuter students. Chickering and Kuper also reported that resident students tended to be higher achieving and more privileged prior to entering college than commuter students and also found that living on-campus tended to widen the gap between these two groups.

Chickering (1974) further explored this differential gap in his book entitled *Commuting versus Resident Students*. Before this book, little had been written about differences in satisfaction with college life, relationships with faculty and student peers, and involvement in

co-curricular activities (Jacoby, 1989). This book focused on the experiences and characteristics of both resident students and commuter students. Chickering remarked that “The residents are the haves and the commuters, the have nots” in higher education (Chickering, 1974, p. 49). When student data from a national sample were compiled for all institutions, resident students came from families with more education and higher incomes, had greater high school achievements, participated in more extracurricular activities and cultural experiences before college, and had loftier aspirations. “Beginning college with fewer advantages than resident students, commuters as a group slip further and further behind...and, as a consequence, college has the effect of widening the gap between the have-not students and the haves” (p. 44).

Chickering (1974) commented on the “have nots” or commuter students with the following statement:

Whatever the institution, whatever the group, whatever the data, whatever the methods of analyses, the findings are the same. Students who live at home with their parents fall short of the kinds of learning and personal development typically desired by the institutions they attend....Students who live at home, in comparison with those who live in college dorms, are less fully involved in academic activities, in extracurricular activities, and in social activities with other students. Their degree aspirations diminish and they become less committed to a variety of long-range goals. Their satisfaction decreases, and they are less likely to return (pp. 84-85).

Chickering (1974) continued to differentiate resident students, as a group, from commuter students. According to his research, resident students receive more parental aid as students and more often had student loans paid back by their parents. Resident students more frequently joined fraternities and sororities and are more involved in intramural sports and other

social activities facilitated by the institution. They also have access to or are forced to experience diverse experiences. Resident students are also more likely to ask advice of their teachers and are more often guests at their teachers' homes. Chickering (1974) also concluded that resident students (after accounting for scholastic ability, prior education, extracurricular involvement, and family/community background) surpass predicted levels of learning and development.

On the other hand, commuter students are less likely to interact with their teachers either in-class or out-of-class and are less likely to take advantage of tutoring programs or study with fellow students. Commuter students have fewer close friends at their institutions and have fewer friends who are college students in general. They are less likely to return to college after their first year, and returning commuter students are less likely to study full time their second year. Commuter students do not encounter diversity as often as residents and are less likely to find ways to circumvent pre-existing hindrances to learning and development. Commuter students do not complete assigned homework as often and, in general, have lower self-esteem than resident students (Chickering, 1974).

A large body of research indicated that living in on-campus housing enhances college students' development and leads to more positive outcomes (Astin, 1977; Pascarella & Terenzini, 1991). Pascarella and Terenzini (1991) and Bliming (1993) found that being a resident student is the single most consistent within-college determinant of educational impact. Pascarella et al. (1994) identified six positive benefits of living on campus. Compared to commuters, resident students:

1. Participate in a greater number of extracurricular, social, and cultural events on campus.
2. Interact more frequently with faculty and peers in informal settings.

3. Are significantly more satisfied with college and are more positive about the social and interpersonal environment on their campus.
4. Are more likely to persist and graduate from college.
5. Show significantly greater positive gains in such areas of psychosocial development as autonomy, inner-directedness, intellectual orientation, and self-concept.
6. Demonstrate significantly greater increases in aesthetic, cultural, and intellectual values, social and political liberalism, and secularism (p. 39).

Chickering (1974) found, that after one year, students who commuted to college gained less from their college experience than students who were immersed in college through living in residence halls. Commuter students, compared with residence students, were less involved in campus activities, less satisfied with college, made fewer gains in personal growth and development, were less committed to identifiable long-range goals, and expressed less confidence in their abilities. This conclusion was supported by Astin (1985) and Pascarella (1984).

The effect of the residential experience seems to have a differential impact based on institutional characteristics. For example, the effect of living on campus had its greatest impact on 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 colleges (Astin, 1973).

Based on data collected annually from first-time, full-time freshman through the Cooperative Institutional Research Program (*CIRP*), Astin's (1975) study found that living in a residence hall as a freshman was associated with reduced possibilities for dropping out. Similarly, living at home with parents negatively affected persistence when compared with living on campus. Among the most significant positive effects of living on campus versus commuting

were involvements in extracurricular activities, interaction with faculty, achievement in academic studies, social life, and satisfaction with the undergraduate experience (Astin, 1977).

Pascarella's (1984) multi-institutional study attempted to determine the effects of residential living on four measures of outcomes: educational aspirations, satisfaction with college, rate of progress through college, and intentions to persist or withdraw after two years. With the influence of all other variables held constant, Pascarella concluded that living on campus versus commuting had no significant, direct effects on any of the four measures of outcome. Rather, the influence of residence was at best small, indirect, and mediated through levels of involvement with faculty and peers. In another study by Pascarella (1985), results showed that living in residence halls had a significant, positive, direct effect on the extent of student interactions with faculty and peers. As can be seen, the results are mixed and inconclusive when examining these outcomes.

In a study of commuter students and those living on campus residences, researchers found that students who lived on campus exhibited greater gains in critical thinking than those who commuted (Pascarella, Bohr, Zusman, Inman, & Desler, 1993). According to Pace (1990), students who lived on campus benefited more in terms of intellectual development even though their participation in relevant activities as measured by the *CSEQ* Activity Scales were not much higher than those who live off campus. This suggests that it may not be the activities themselves that promote or foster development, but the contact with peers and others that such activities produce. Pascarella et al. (1993) concluded:

Residential living may be most influential in fostering cognitive growth in areas that are not closely linked to specific course or curricular experiences. . . . General cognitive

growth during college is fostered not just by course work and academic involvement, but also by social and intellectual interaction with peers and faculty. (p. 219)

Such interactions are more likely to occur when students live on campus than if they commute (Chickering, 1974; Pascarella & Terenzini, 1991).

Additional studies examine the influence of students' residence status (living on-campus or living off-campus) on academic and social outcomes. The outcome measures are varied and include student satisfaction with college, participation in extracurricular activities, study habits, personal growth and development.

Students who live on campus are significantly more likely to continue and graduate than other students (Astin, 1975, 1977). However, this research disclosed little evidence that merely living in a residence hall increased student achievement as measured by grades. Moreover, findings from a meta-analysis looking at the influence of college residence halls on academic performance showed an insignificant advantage to residence students over commuter students (Bliming, 1989). This finding is further supported by findings that residential halls do not improve study habits when compared to commuters (Schroeder & Mable, 1994). Bliming's research found little evidence supporting the notion that residential living has a significant influence on academic performance (Bliming, 1989). These findings paralleled Chickering's (1974) conclusion that once initial differences are controlled, resident students' and commuter students' performances are compatible.

Satisfaction with the institution, an important but sometimes overlooked variable in determining the quality of the undergraduate experience, directly correlated with the determined quality of the undergraduate experience as well as involvement (Abrahamowicz, 1988; Astin,

1993; Whitt, 1994), persistence (Pascarella & Terenzini, 1991; Tinto, 1987), and academic performance (Bean & Vesper, 1994).

Astin (1993) expanded upon this idea of collegiate satisfaction by stating that “the student’s degree of satisfaction with the college experience proves much less dependent on entering characteristics. . . .and more susceptible to influences during their freshman year from the college environment” (p. 277). Consequently, collegiate satisfaction must be considered a factor (Astin, 1977, 1993; Bean & Vesper, 1994). A number of out-of-class experiences have been linked to student satisfaction. Astin (1993) looked at environmental factors associated with satisfaction and determined that satisfaction with the total college experience was directly associated with greater student-faculty interaction as well as frequent student-student interaction. Satisfaction with the overall experience was detrimentally affected by the lack of a perceived sense of community and by off-campus employment.

Student satisfaction with the institution had a more positive influence on student grades (Bean & Bradley, 1986). Not surprisingly, the interaction between students and faculty and students and students seems to be a positive influence on perceived satisfaction (Astin, 1993; Bean & Kuh, 1984).

Students who live on-campus were found to be more satisfied with their college experience. Both Welty (1976) and Pascarella (1985) found that resident students, compared to commuter students, perceived the campus environment as more friendly, and resident students had more positive interaction with their peers. Pascarella (1985) and Astin (1973, 1977) found a clear relationship between living in a residence hall and greater satisfaction with campus environment and social climates.

According to researchers, the reason why resident students found greater satisfaction than commuter students did in their collegiate experiences was simple involvement in on-campus extracurricular activities (Astin, 1973, 1977; Chickering, 1974; Pascarella & Terenzini, 1991; Welty, 1974). The above studies found that resident students participate in a greater number of extracurricular activities than do students living off-campus. A longitudinal study at the University of Maryland (1989) examined differences in student involvement. The findings demonstrated that although students—both commuter and resident—arrived at the university with similar backgrounds, as early as the second semester of the freshman year, significant differences in involvement could be seen. This included activities such as student organizations, on-campus jobs, and relationships with students, faculty, and staff at the university.

Pascarella and Terenzini (1977) found a correlation between student involvement and level of commitment. These findings indicated that involvement had a greater influence on persistence for students with lower levels of commitment to both their educational goals and the institution at hand; in other words, the greater the commitment, the less significant the role played by involvement. The extent to which participation in co-curricular activities affected persistence and progress towards educational goals seemed to be conditional in that such participation influenced the student directly. Because a variety of out-of-class experiences are related to student commitment to the institutions, there seemed to be a link between participation in certain out-of-class activities and persistence via increased student commitment to the institution and programs and earning a degree (Pascarella & Terenzini, 1983).

Research by Bers and Smith (1991) examined community college students' academic and social involvement/integration and concluded that those factors influencing persistence for four-year students also held true for community college students. The following five variables

discriminated between persisters and nonpersisters: intent to re-enroll; educational objectives; pre-college characteristics; employment status; and academic involvement/integration and social involvement/integration.

Although Bers and Smith found some of the same factors were important at both four-year and two-year schools, several studies have established that social involvement and integration seems to have less impact at two-year schools. Research looking at the relationship between faculty-student interactions outside of the classroom and student persistence and degree attainment generally indicates a positive influence, however, with some mixed findings (Pascarella, 1980). Some researchers (Astin, 1977, 1993; Pascarella & Terenzini, 1977; Terenzini & Pascarella, 1980) have found persistence and progress towards educational goals to be “positively related to total amount of student-faculty non-classroom contact with faculty and particularly to frequency of interactions with faculty to discuss intellectual matters” (Pascarella & Terenzini, 1991, p. 394). However, Bean (1980) found that student-faculty non-classroom contact with faculty and the frequency of interactions with faculty to discuss intellectual matters were unrelated to persistence and progress towards educational goals. Faculty-student social interactions seemed to positively influence educational aspirations and degree completion. When faculty engage students outside the classroom, and these interactions are positive, students may feel a sense of affirmation and develop a stronger bond with the institution. Such interactions may reinforce students’ initial goals and deepen their commitment to graduate (Pascarella & Terenzini, 1991).

Christie and Dinham (1991), while exploring the factors associated with persistence and commitment, found that two types of institutional experiences were important to social

involvement and integration: living in campus residence halls and participating in co-curricular activities. These experiences provide both opportunities for students to become involved in co-curricular activities and to meet other students by allowing access to campus-based social networks. At commuter institutions, there seemed to be little relationship between persistence and social involvement/integration (Pascarella & Chapman, 1983; Williamson & Creamer, 1988). The key relationship between persistence and social involvement/integration for commuter institutions was academic integration (Pascarella & Chapman, 1983).

For community colleges, social involvement/integration were less a factor than academic integration. Baird (1990) found that students' level of involvement was low, particularly out-of-class involvement for community college students. He found students with increased educational gains were often or very often involved in activities related to academic pursuits. Specifically, in-class academic activities with the highest level of involvement were taking notes in classes, integrating facts and ideas, attentive listening in class, and thinking about practical application of ideas. Haplin (1990) replicated a study by Pascarella and Terenzini (1980) to determine influences on student outcome behaviors at two-year community colleges. Haplin's study found that there was a greater impact of academic integration on student outcomes than social involvement and integration at commuter community colleges.

According to Terenzini, Springer, Pascarella, and Nora (1995), many dimensions of cognitive development had a social or interpersonal base, suggesting that such gains might be a function of a variety of student experience, not just those of the formal academic program (i.e., the linking of classroom-based projects with off-campus educational experiences and cultural experiences, or linking students with peers to tutor or to form study groups outside the classroom). Terenzini et al. (1995) also found negative relationships between the amounts of

time students spent socializing with friends and interest in academic learning during the first year of college.

However, peer interactions that foster learning are “discussing course content with other students, working on group projects for classes, tutoring other students, participating in intramural sports...discussing racial or ethnic issues, socializing with someone from a different race or ethnic group, participating in a campus protest, being elected to a student office, and hours per week spent in socializing or in student clubs or organizations” (Astin, 1993, p. 385).

Summary

In-class and out-of-class experiences affect students’ learning and development. Davis and Murrell (1993) summarized the effects of these experiences by concluding that “academic and social effort expended by students are the principal determinants of the extent to which students themselves report that they grow and learn in college. Social effort is strongly influenced by academic effort, which suggests that for growth to occur, the work that is done in the classroom must find expression in other aspects of a student’s life” (p. 286).

The effects of college are cumulative and mutually shaping. Student learning is influenced by a variety of experiences and conditions on a campus, particularly when out-of-class environments and experiences complement and encourage students to integrate what they learn in class with their lives outside the classroom (Kuh, 1995). Kuh concludes “Among the more powerful out-of-class experiences are those that demand sustained effort and require that students interact with people from different groups and peers from different backgrounds” (p.145).

The literature revealed that student status (resident students who live on campus versus commuters) was the “single most consistent within-college determinant of impact” (Pascarella &

Terenzini, 1991, p. 611), shaping both the essential character and developmental impact of an individual's college experience. Those students who live on campus, as compared with students who commute, (a) participate in more extracurricular, social, cultural events on campus; (b) interact more frequently with faculty and peers; (c) are more satisfied; (d) are more likely to graduate from college; and (e) exhibit greater gains in education goals and outcomes (Pascarella, Terenzini, and Blimling, 1994).

In regard to gains in educational goals and satisfaction, student involvement is the key (Astin, 1984; Pace, 1984). The benefits of out-of-class experiences depend not only upon what the institution does and does not provide for the students but also on the extent and quality of effort that the individual student puts into these activities (Pace 1984, 1990). This seems to be the case for students at commuter institutions as well (Abrahamowicz, 1988).

As Pace (1979a) recommended, when considering student outcomes and satisfaction, researchers must attend to what the institution offers and what the students do with those offerings. Pace (1979a, 1984) suggested that the most important factor affecting what students gain from college is the quality of effort they exert in academic and social activities. Pace and Kuh's *College Student Experiences Questionnaire* (1998) provides an excellent way to measure how students interact with their institutional environment. The ways in which students change and interact with their environment are critical. Environments that lead to greater involvement and integration have been shown to be more effective than those that do not. Likewise, students play a large role in creating the environment they inhabit. Research on the relationship between learning and involvement was advanced by the development of the *Community College Student Experiences Questionnaire* (CCSEQ: Friendlander, Pace, & Lehman, 1999). Pace's theory served as the basis for the CCSEQ, which assesses the breadth and quality of effort community

college students exert in attaining educational gains and development. Pike (1997) urges researchers to examine the similarities and differences in the experiences of resident students and commuter students since these differences in student status influence educational outcomes, participation in activities and experiences, and student satisfaction. This study will explore the similarities and differences between resident students and commuter students in terms of their reported levels of involvement in activities, educational outcomes, and their satisfaction.

Definitions of Key Terms and Concepts

For the purposes of this study, the following definitions will be used:

Academic experiences: all activities in which students engage during undergraduate study that are either directly or indirectly related to their learning and performance and occur in the formal classroom or laboratory setting such as participating in class discussions, working on a paper or project with other students, explaining material to another student, and asking questions about points made in class discussions or readings (Pace, Murrell, Friedlander, and Lehman, 1999).

Commuter Student: Students who do not live in the institutional–owned campus student housing apartments (Stewart & Rue, 1983; National Clearinghouse for Commuter Programs 1987).

Community College Student Experiences Questionnaire (CCSEQ): the self-report instrument developed by Pace, Murrell, Friedlander, and Lehman (1999) that examines the degree of interaction between the student and the college. The *CCSEQ* assesses information about community college students in four areas: (a) amount, breadth, and quality of effort of both in-class and out-of-class experiences, (b) progress towards important educational outcomes, (c) student satisfaction with the community college environment, and (d) demographic and background characteristics (Ethington, Guthrie, and Lehman, 2001).

Educational Outcomes: the Estimate of Gains section of the *CCSEQ* identifies 25 important educational goals that students self-report how much they have gained or made progress towards. The *CCSEQ* assesses progress in six areas: Career Preparation; Arts; Communication Skills; Mathematics, Science, and Technology; Personal and Social Development; and Perspectives of the World (Ethington, Guthrie, and Lehman, 2001).

Environment: refers to the various programs, policies, faculty, peers, and educational experiences to which the student is exposed (Astin, 1977).

Interaction: the reciprocal action or effect on each other, faculty-student interaction or peer-student interaction (Banning, 1980; Pascarella and Terenzini, 1991).

Involvement: student involvement refers to the amount of physical and psychological energy that the student devotes to the academic experience (Astin, 1984).

Outcomes: refers to the student's characteristics after exposure to the environment; the outcomes of this study are quality of effort, progress towards educational goals, and student satisfaction (Ethington, Guthrie, and Lehman, 2001).

Out-of-class experiences: all activities in which students engage during undergraduate study that are either directly or indirectly related to their learning and performance and occur beyond the formal classroom or laboratory setting (Pace, 1979, 1984, 1992).

Quality of Effort: the amount, scope, and quality of effort students put into taking advantage of the opportunities offered to them by the college. The College Activities section of the *CCSEQ* measures the student quality of effort in the use of facilities and programs provided by the college and experiences with students, faculty, and staff members. The *CCSEQ* contains nine Quality of Effort scales grouped by topic as follows: Course Activities; Library Activities; Faculty; Student Acquaintances; Art, Music, and Theater Activities; Writing Activities; Science

Activities; Career/Occupational Skills; and Computer Technology (Ethington, Guthrie, and Lehman, 2001).

Resident Student: Students who live in the institutional-owned on-campus student housing apartments (Stewart & Rue, 1983; National Clearinghouse for Commuter Programs (1987).

Satisfaction: represents a student's perception of the college environment. The College Environment section of the *CCSEQ* takes five of the eight questions to form a scale that represents a student's perception of the college environment. The items involved are those that ask the student to rate the students, instructors, courses, support staff, and the college as a whole (Ethington, Guthrie, and Lehman, 2001).

Student responsibility: means quality of effort, and responsible student behavior is defined by the amount of time a student devotes to high-quality encounters with faculty and peers in-class and out-of-class (Murrell and Davis, 1993).

CHAPTER THREE

Research Design and Methods

Introduction

This study explored the similarities and differences between resident students and commuter students in terms of their levels of involvement in activities, gains or progress towards educational goals, and satisfaction with the college environment. Since the three research questions explored the differences between two groups of students—resident and commuter, the primary research design was the cross-sectional survey. The major purpose of the survey was to “describe the characteristics of a population” (Fraenkel & Wallen, 2000, p. 432). In essence, the researcher intended to determine how members of two independent populations (resident students and commuter students) report their perception regarding three major categories of variables (levels of involvement, educational outcomes, and satisfaction) and, then, explored differences among these populations. The cross-sectional survey collected information from a predetermined population at one point in time.

The three research questions gathered information from the two target populations by using a commercially-developed survey instrument. In this study, data collected from resident students and commuter students that was analyzed to address the research questions. The target populations were all resident students and commuter students at HCC.

Method

Site Selection

The site for this study was a public, comprehensive, two-year community college located within a rural, Appalachian community. Homestead Community College (fictitious), with an enrollment of approximately 2,000 students on its main residential campus, was selected as the

research site because the college has just recently created and opened its on-campus student resident housing. Another reason for this site selection was the availability of indirect student data that could be used for future longitudinal investigation.

Sampling Procedure

Since the study explored the difference between resident students' and commuter students' levels of involvement, educational outcomes, and satisfaction, the study actually involved one sample and one census of these populations. The two populations being investigated were commuter students and residential students. This research study involved a sampling of the commuter students and a census for the resident students. The accessible student population was all Spring 2004 resident students and commuter students at Homestead Community College (HCC), part-time and full-time, who attended the main campus. Resident students and commuter students were identified by the first additional question 1. Do you reside at the Willowbrook Woods Apartments? (A) Yes (B) No to the *CCSEQ*.

During the Spring 2004 semester, the Community College Student Experiences Questionnaire (*CCSEQ*) was administered during class to all students in every English and Mathematics course, and to all students enrolled in the Career/Technical Programs at HCC. Distributing and completing the questionnaire in the classroom provided the best response rate. Faculty were asked to reserve a block of class time so that the researcher or trained assistants can go into the classroom and collect the data. Approximately 50 percent (800-1000 students) of HCC students were enrolled in either an English or Mathematics course during the semester. In addition, the *CCSEQ* were administered during class to all students enrolled in Career and Technical Programs at HCC. Approximately 25-30 percent (500 to 600 students) of the HCC students were enrolled in these programs. Overall, the sampling method of distributing and

completing this survey in these classes allowed for approximately 60 percent (1200 students) of the students to participate in the survey results. Of the possible 1,200 participants, the researcher anticipated that approximately 1,000 students would be commuter students, and 200 would be resident students. The administration of the HCC was conducted during the twelfth week through the fourteenth week of the Spring 2004 semester.

A goal of at least 80% resident student participation (approximately 160 to 180 students) was desired. When this goal was not achieved, the follow-up procedure described was implemented. The researcher and Community Assistants for the student housing complex directly contacted all resident students and requested their participation if they had not completed the survey in this study. Homestead Community College's student population is comprised of ten percent resident students (201 students) and ninety percent commuter students (1,878 students).

Strategy for Attaining Institutional Approval and Participant Cooperation

The researcher gained approval to conduct the research at Homestead Community College by sending a letter to the President (see Appendix A for the letter of request). The request letter described the purpose of the study, the research methods, and the benefits the institution might expect in return for cooperation. The researcher spoke directly to the Vice President of Academic Affairs, Dean of Students, and Dean of Institutional Research about the research study and instrument. The researcher gained the cooperation of faculty by introducing the study to the college community at an All-College Faculty/Professional Staff Meeting. A short article in the college newsletter promoted faculty involvement and support of this study. The researcher spoke directly to the division chairpersons about the research study to gain cooperation and permission to administer the *Community College Student Experience Survey*

during class time. In addition, the researcher attended the individual division meetings for English, Mathematics, and Career/Technical programs to explain the study's purpose and goals to the faculty. At this time, the faculty provided information about exactly what the researcher and institution were requesting of them.

Data Collection and Assurance of Trustworthiness

The data was collected directly from student participants through the use of a standardized instrument known as the *Community College Student Experiences Questionnaire* (CCSEQ, 1999). The CCSEQ, a student self-report instrument, examined the degree of interaction between the student learner and the college. The CCSEQ assessed information about community college students in four areas: (a) amount, breadth, and quality of effort of both in class experiences; (b) progress toward important educational outcomes; (c) satisfaction with the community college environment; and (d) demographic and background characteristics (Murrell & Glover, 1996).

The instrument content covered College Activities (107 items in 13 topic areas), Estimate of Gains (student self-evaluation on 25 important educational goals), and College Environment (8 items). The College Activities section produced information about individual activities, but also formed eight Quality of Effort scales.

Eight Quality of Effort scales found in the CCSEQ measured the amount and breadth of involvement exerted by students. The College Activities section of the CCSEQ measured the student quality of effort in the use facilities and programs provided by the college and experiences with students, faculty, and staff members. Respondents indicated the number of times they have participated in activities that stimulate the development of academic skills and social growth in the following areas: contact with faculty members, other students, organizations,

and counseling and career centers; experiences with writing; engagement in classroom activities; and instruction in study and vocational skills (Murrell & Glover, 1996).

The eight Quality of Effort Scales were generated from questions in eight of the thirteen topic areas (68 items). The items for individual topic areas were coded for referral to *CCSEQ* found on pages 143-151. The eight individual Quality of Effort Scales were grouped according to topic as follows: Course Activities (CLASS 1 – 10); Library Activities (LIB 1 – 7); Faculty (FAC 1 – 9); Student Acquaintances (ST ACQ 1 – 6); Art, Music, and Theater Activities (AMT 1 – 9); Writing Activities (WRITE 1 – 8); Science Activities (SCI 1 – 11); and Computer Technology (COMP 1 – 8). Each Quality of Effort scale consisted of several related items measured on four-point scales ranging from 1 = never to 4 = very often. Each scale was formed by adding the separate scores for each item in a group in the following way: if a student answered “never” to an item, the student receives one point; “occasionally,” two points; “often,” three points; and “very often,” four points. The points for all items in a group are then added together, and the result is a scale score for that item group (Ethington, Guthrie, & Lehman, 2001). Higher scores reflected greater and more diverse amounts of involvement and effort. Five Additional Areas of College Activities (not considered part of the “Quality of Effort” dimension) were grouped together according to topic as follows: Career/Occupational Skills (OCC 1 – 9); Learning and Study Skills (LSS 1 – 9); Athletic Activities (ATH 1 – 6); Clubs and Organizations (CCP 1 – 8); and Counseling and Career Planning (CPP 1 – 8). These additional areas were measured in the same manner.

The coefficients of reliability for each College Activity Scale indicated that each subscale measured a specific Quality of Effort construct with a high degree of internal consistency, and that scores received on each of the scales should be stable over time in a test-retest situation

(Ethington, Guthrie, & Lehman, 2001, p. 18). Using Cronbach's alpha as a measure of internal consistency, the coefficients ranged from .82 to .93. The reliability coefficients for each College Activity Quality of Effort construct are as follows: Course Activities (.86); Library Activities (.86); Faculty (.86); Student Acquaintances (.91); Art, Music, and Theatre (.82); Writing Activities (.90); Science Activities (.93); Career/Occupational Skills (.93); and Computer Technology (.86). No coefficients of reliability are reported for the four additional areas of College Activities (not considered part of the Quality of Effort dimension). Additionally, no coefficients of reliability were reported for the Estimate of Gains Scale and Satisfaction Scale. Again, although the authors of the manual stated that the scores received on each of the scales should be stable over time in a test-retest situation, no statistical evidence was provided.

The Estimate of Gains section of the *CCSEQ* asked students to report how much they had gained or made progress toward a series of 25 important educational goals. The *CCSEQ* measured students' self-reported progress in six areas: Career Preparation (CAR 1 – 4); Arts and Communication Skills (AC 5 – 8); Computers (COMP 9 – 10); Personal and Social Development (PSD 11, 12, 13, 23, 25); Mathematics, Science, and Technology (MSI 14, 15; 16, 17, 19); and Perspectives of the World (PW 18, 20, 21, 22). Question 24 was not considered part of the Estimate of Gains Scale, but is measured in the same manner. Each Estimate of Gain scale consists of several items measured on four-point scales ranging from 1 = very little to 4 = very much. The Estimate of Gains scale was formed by adding the separate scores for each item in the following way: if a student answered “very little” to an item, the student received one point; “some,” two points; “quite a bit,” three points; and “very much,” four points. Scores for this scale may range from 25 to 100, with the higher scores indicating higher levels of perceived growth and progress due to attending college. An alpha coefficient of .93 was obtained for this

scale, indicating that this 25-item measure was a reliable index of student perceptions of gains in academic and personal and growth (Ethington, Guthrie, & Lehman, 2001).

The College Environment section asked eight items about students' perceptions about the nature of their environment. Five of the eight questions form the College Environment Scale (ENV 2 – 6), when added together, formed a scale that represented a student's perception of the college environment. The items involved were those that asked the student to rate the students, instructors, support staff, courses, and the college as a whole. Each College Environment scale consisted of items measured on a four-points scale ranging from 1 = few or none to 4 = all. This scale was formed by adding the separate scores for each item in the group in the following way: if a student answered "few or none" or "rarely or never" to an item, the student received one point; "some of the time" or "some," two points; "most of the time" or "most," three points; and "all of the time" or "all," four points. Scores for the scale range from 5 to 20, with the higher scores indicating higher levels of perceived satisfaction with the college environment (Ethington, Guthrie, & Lehman, 2001). Questions ENV 1, ENV 7, and ENV 8 were not considered part of the Satisfaction Scale, but were measured in the same manner.

The last page of the *CCSEQ* provided space for locally developed questions. One question concerning resident students and commuter students was included. This first question allowed the researcher to identify the two groups (resident students and commuter students).

IRB Process/Approval

After the defense and approval of the dissertation prospectus, the researcher obtained approval from West Virginia University's Institutional Review Board for the Protection of Human Subjects (IRB) for Application for Exemption (see Appendix F). Approval from the IRB

staff was received prior to beginning the research. The researcher completed Ethics Training before approval was granted.

The IRB process denied the request of the researcher to have students provide their student identification number. The reason for requesting students' identification number was to identify the residence students who had and had not completed survey. A goal of 80% response rate for the resident population had been established. Students did identify their status as resident or commuter on the survey. All completed surveys from both groups were reviewed to establish a completion rate for this group and identify the number of resident students who still needed to complete the questionnaire to reach this target completion rate. This procedure allowed the researcher to proceed with follow-up survey techniques (see Sampling Procedures Section of this chapter) required to increase participation rates for this group. Each student received a cover letter that introduced the *CCSEQ* (see Appendix C). This cover letter accompanied the survey. The cover letter was on the researcher's WVU departmental letterhead and included the following:

1. purpose of study
2. a statement that the project is research being conducted in partial fulfillment for the dissertation
3. a statement that subjects' responses will be kept anonymous or confidential
4. a statement that subjects do not have to answer every question
5. a statement that subjects' class grade or athletic status will not be affected by refusal to participate
6. a statement that participation is voluntary.

After the *CCSEQ* survey, the cover letter, the permission letter from external institution (Appendix B), and the Application for Exemption had been reviewed and determined to meet requirements, the IRB recommended this study for exemption and the researcher began.

Data Analysis

The three research questions focused on whether there were significant differences between resident students and commuter students regarding their reported levels of involvement in college activities, in terms of their perceptions of gains or progress towards educational goals, and in terms of their reported levels of satisfaction of the college environment. In these three areas, the mean scale scores for both groups (resident students and commuter students) were compared to determine if there were differences between these groups in involvement in activities, educational gains, and satisfaction with the college environment. The first parametric technique for analyzing this type of quantitative data is Multivariate Analysis of Variance (MANOVA). According to Fraenkel and Wallen (2000):

In brief, variation both within and between each of the groups is analyzed statistically, yielding what is known as an F value. As in the t -test, this F value is then checked in a statistical table to see if it is statistically significant. It is interpreted quite similarly to the t value, in that the larger the obtained value of F , the greater the likelihood that statistical significance exists. (p. 259-260).

The MANOVA allows two or more dependent variables in the same analysis, thus permitting a more powerful test of differences among means, as compared to a t -test. The reason for using the F test is that, when comparing two means at a time as in the t -test, the rest of the means under study are ignored. With the F test, all the means are compared simultaneously (Bluman, 1992).

The MANOVA was used to compare the difference among means of totals (resident students and commuter students) for the eight areas of college activities comprising the Quality of Effort Scales and the five additional areas of college activities (Research Question 1 – one

overall MANOVA and five individual area MANOVAs), the overall for the Estimate of Gains Section and six areas of the Estimate of Gains Scales (Research Question 2 – one overall MANOVA and six area MANOVAs), and the Satisfaction Scale (Research Question 3 – one MANOVA). A total of fourteen MANOVAs were performed in this study. If the MANOVA yields a statistically significant F value ($p < .05$), an independent t -tests was computed for each item within this scale. For example, if a statistical significant F value is yielded for Course Activities (CLASS 1 –10), every individual item within this grouping will be compared using a t -test to determine where the item differences exist between the two groups. Also, in the Estimate of Gains section, Question 24, and in the College Environment section, Questions 1, 7, 8, the t -test was used to determine if differences between the means exist between resident students and commuter students. Statistically significant differences were reported.

The parametric technique for analyzing this type of quantitative data is the t -Test for Means. According to Fraenkel and Wallen (2000):

The t test is a statistical test used to see whether a difference between the means of two samples or populations is significant. The test produces a value for t , which the researcher then checks in statistical table to determine the level of significance that has been reached. If the .05 level of significance is reached, the researcher rejects the null hypothesis and concludes that a real difference does exist (p. 258).

The t -test for independent means was used to compare the mean scores of two different or independent groups. The t -test for independent means was used for the eight areas of College Activities comprising the Quality of Effort Scales (68 items), the five additional areas of the College Activities section (39 items), the twenty-four items for the Estimate of Gains section, the five items comprising the College Environment Scale, and the four additional items of the in the

Estimate of Gains and College Environment section. Where significant effects were found, the independent *t*-tests determined if there were differences in these items based on whether students reside in on-campus housing (resident students) or if the students reside off-campus (commuter students). (See Figure 3).

In addition, descriptive statistics such as frequency and percentages were reported for all information collected in the survey such as student demographics, college programs, and courses taken at the college.

Figure 3. Model for Comparison Study based upon Astin’s (1977) and Pace’s (1979) Models. This model compares resident students with commuter students – assessing the impact of residence on students’ level of involvement in college activities and experiences, gains or progress towards educational goals, and student satisfaction.

Limitations of the Study

This study was completed at a public, comprehensive, two-year community college within a rural, Appalachian community. One limitation to this study was that the results may not be transferable or applicable beyond this setting to other community colleges or four-year institutions. The reason for this is that all residential campuses are not structured the same – housing units vary in configuration, as well as special programs and services available such as learning communities.

The second limitation was the results were based on self-reported data. Self-reported data are vulnerable to recall and social desirability (Miller & Winston, 1990). Thus, researchers

must trust that the students in the sample recall their behavior accurately and that they do not present themselves in a socially favorable light.

Researcher's Background

Currently, the researcher is a doctoral candidate in educational leadership studies at West Virginia University. In addition, he is a full-time associate professor of psychology and sociology at a community college. He has 17 years of experience teaching and 7 years of experience in student services serving as the American with Disabilities Act Coordinator and Career Services Director.

Research Timeframe

This research study took approximately twelve months to complete. After Human Subjects Review Board approval had been obtained, the first step was the data collection of the *Community College Student Experiences Questionnaire* (1999), which began the twelfth week of the Spring semester 2004 and continued through the fourteenth week of the Spring semester 2004.

After data collection, the surveys were sent to the Center for the Study of Higher Education for scoring. The scoring center experienced computer problems and returned the compiled data in early August. The researcher's data analysis and the writing of conclusions were completed December 2004 through early April 2005. A complete draft of the dissertation was submitted in April 2005, and the revised final defended on May, 9, 2005.

Conclusion

Because the vast majority of community colleges were founded to serve commuter students who live within a local and regional area, student residential housing at two-year institutions has been seen as unnecessary. However, an increasing number of community

colleges are opening student resident housing. In contrast to all the research available about the impact at four-year institutions of residence status (resident students and commuter students), the literature review revealed there has been little research conducted on resident students and commuter students on community college campuses. The studies conducted have found differences between resident students and commuter students in terms of students' levels of involvement, progress towards educational goals, and satisfaction with the college environment. Among the most significant positive effects of living on campus versus commuting were involvements in extra-curricular activities, interaction with faculty and peers, and satisfaction with the undergraduate experience.

In this review, the contributions of four theorists have been discussed. The work of Astin, Pace, Pascarella, and Tinto produced similar findings that the most important factor affecting what students gain from college is their involvement in and the quality of effort they exert in academic and social activities both in-class and out-of-class. That is, students who take the responsibility to involve themselves in the activities and events experience more progress towards their educational goals and satisfaction with the college environment. This study investigated the impact of student residence on three research questions that focus on whether there are significant differences between resident students and commuter students regarding their reported levels of involvement in college activities, in terms of their perceptions of gains or progress towards educational goals, and in terms of their reported levels of satisfaction with the college environment.

CHAPTER FOUR

Results

Introduction

The purpose of this study was to investigate whether resident students' and commuter students' reported levels of involvement in activities, achievement of educational goals, and satisfaction with their educational experiences are the same or different at Homestead Community College, as measured by the *Community College Student Experiences Questionnaire (CCSEQ)*. The study compared data from the resident students' self-reports to the commuter students' self-reports in these three areas. Three research questions were examined in this study.

1. Is there a statistically significant difference between resident students (students who live in on-campus apartments) and commuter students (students who do not live in on-campus apartments) in terms of their reported levels of involvement in college activities?
2. Is there a statistically significant difference between resident students and commuter students in terms of their perception of gains or progress towards educational goals?
3. Is there a statistically significant difference between resident students and commuter students in terms of their reported levels of satisfaction with the college environment?

This chapter presents the results of the research study, including statistical analyses of the data. This chapter begins by outlining the population and sample of this study. Next, the demographic descriptions of the participants are provided. Finally, the statistical analyses of the data pertaining to the three research questions are presented.

The undergraduate students enrolled in Homestead Community College during the Spring 2004 semester served as the population of this study. A sample was chosen from the population

of 2,079 headcount students enrolled at a public, comprehensive, two-year community college located within a rural, Appalachian community. The resident population consisted of 201 students (1% of the total population) for the Spring 2004 semester. The commuter population consisted of 1,878 students (90% of the total population). Following the sampling procedures described in Chapter Three, 921 students completed the survey. Four students did not identify whether they were resident students or commuter students and were eliminated from the study's data. Nine hundred seventeen surveys were used in the analysis for this study (44% of the total population). The researcher visited Spring courses and asked students to participate. The researcher visited the following courses: Developmental English I 90 (2 sections), Developmental English II 93 (5 sections), Freshman English 101 (10 sections), Beginning Algebra 90 (5 sections), Intermediate Algebra 93 (5 sections), Beginning/Intermediate Algebra 96 (2 sections), College Algebra 102 (8 sections), Elements of Math 105 (2 sections), Math for Elementary Ed I 216 (2 sections), Math for Elementary Ed II 217 (2 sections), Allied Health Programs (3 courses), Business Management (2 courses), Auto Technology (2 courses), Communication Arts Technology (2 courses), Computer Science Technology (2 courses), Criminal Justice (2 courses), Culinary Arts (2 courses), Criminal Justice (2 courses), Dental Hygiene (2 courses), Forestry Technology (2 courses), Human Service Associates (2 courses), Medical Laboratory Assistant (2 courses), Nursing (5 courses), Occupational Therapy Assistant (2 courses), Physical Therapy Assistant (2 courses), Radiologic Technology (2 courses), Respiratory Therapist (2 courses), and Therapeutic Massage (2 courses).

The procedures for administration of the *CCSEQ* were followed as described in Chapter 3 except for three math classes. Twenty-four students in these three web-enhanced classes completed the survey outside of class and returned the surveys the next class meeting. The

majority of students completed the survey while the researcher visited each class and this process led to higher response rate. Ultimately, 740 commuter students completed the survey and this represents 36% of the total population. One hundred seventy-seven resident students completed the instrument and this represents 9% of the total population. At Homestead Community College, the majority of students ($n = 1,878$) were commuter students and only a small proportion ($n = 201$) was resident students.

Demographic Data

The *CCSEQ* includes demographic questions which gather background information such as the students' age, gender, race or ethnic identification, employment, and family responsibilities. The instrument also contains questions related to college characteristics of the students including the number of credits currently enrolled in, total number of credits completed, grades, hours spent studying, hours spent on campus studying, and reasons for attending college. Across the survey, all students did not complete all items. Therefore, the total number of responses indicated for resident and commuter students is not equivalent to the total number of students who completed the survey. An analysis of the background information revealed that 82% of the resident students were between the ages of 18 to 22, as compared to 48% of the commuter students at Homestead Community College (see Table 1). Ten percent of the resident students and 16% of the commuter students were between the ages of 23 to 27. Nine percent of the resident students were 28 or older compared to 36 % of the commuter students. The data revealed that most resident students were traditional age students, whereas the commuter

Table 1 Demographic Characteristics of Participating Students

Item	HCC Population		Group					
			All Students		Resident		Commuter	
	<i>N</i>	%	<i>N</i>	%	<i>n</i>	%	<i>n</i>	%
Age	2,079		912		177		735	
18-19	627	30%	254	28%	79	45%	175	24%
20-22	338	26%	244	27%	65	37%	179	24%
23-27	321	15%	134	15%	17	9%	117	16%
28-39	253	18%	196	21%	13	7%	183	25%
40-55	216	10%	75	8%	3	2%	72	10%
Over 55	23	1%	9	1%	0	0%	9	1%
Gender			903		177		726	
Male	647	31%	243	27%	74	42%	169	23%
Female	1,432	69%	660	73%	103	58%	557	77%
Ethnicity			903		173		730	
Native American	9	1%	7	1%	2	1%	5	1%
Asian or Pacific Islander	14	1%	7	1%	3	2%	4	1%
Black, African-American	194	9%	72	8%	56	32%	16	2%
Hispanic, Latino	24	1%	11	1%	6	3%	5	1%
White	1,783	85%	792	87%	98	57%	694	94%
Other	55	3%	14	2%	8	5%	6	1%
Native Language Is English			911		176		735	
Yes	2,030	98%	873	96%	152	86%	721	98%
No	49	2%	38	4%	24	14%	14	2%

students were a balanced mix of both traditional age and non-traditional age students (see Table 1). Homestead Community College's actual age population distribution is closely reflected in the total percentages of this study for all students.

In terms of gender, 42% of the resident students were male compared to 23% of the male commuter students (see Table 1). Fifty-eight percent of the resident students were female compared to 77% of the female commuter students. Homestead Community College's actual gender population is comprised of 31% male and 69% female commuter students which is closely reflected in the total percentages of this study for all students.

The comparison of ethnicity data reveals differences between the two groups. Analyses of ethnicity data revealed that 32% of the resident students identified themselves as Black, African-American compared to 2% of the commuter students (see Table 1). Fifty-seven percent of the resident students indicated they were Caucasian compared to 94% of the commuter students. Fourteen percent of the resident students indicated that their native language is not English compared to 2% of the commuter students. Homestead Community College's actual ethnic population is closely reflected in the total percentages of this study for all students.

An analysis of the responses to work and family responsibility questions revealed that 47% of the resident students did not have jobs compared to 28% of the commuter students (see Table 2). Twenty-two percent of resident students reported working 10 hours or less per week and 31% reported working over 10 hours per week. Nine percent of commuter students reported 10 hours or less and 63% reported working over 10 hours. Commuter students were more likely to have a job and reported more hours per week working on the job than resident students.

Table 2 Students' Work and Family Responsibilities

Item	Group					
	All Students		Resident		Commuter	
	<i>N</i>	%	<i>n</i>	%	<i>n</i>	%
Number Of Hours Per Week Spent Working On The Job	911		177		734	
None, No Job	290	32%	84	47%	206	28%
1-10 Hours	108	12%	39	22%	69	9%
11-20 Hours	139	15%	19	11%	120	16%
21-30 Hours	187	21%	21	12%	166	23%
31-40 Hours	130	14%	8	5%	122	17%
More Than 40 Hours	57	6%	6	3%	51	7%
How Much Time Job Takes Away From School Work	903		175		728	
No Job	285	32%	86	49%	199	27%
Does Not Interfere	179	20%	41	23%	138	19%
Takes Some Time	335	37%	39	22%	296	41%
Takes A Lot Of Time	104	12%	9	5%	95	13%
How Much Time Family Responsibilities Take Away From College Work	910		177		733	
No Family Responsibilities	259	28%	90	51%	169	23%
Do Not Interfere	216	24%	44	25%	172	24%
Take Some Time	301	33%	36	20%	265	36%
Take A Lot Of Time	134	15%	7	4%	127	17%
Participation in a Work-Study Program	907		174		733	
Yes	173	19%	35	20%	138	19%
No	734	81%	139	80%	595	81%

Twenty-seven percent of resident students indicate that their jobs take some time or a lot of time away from school work compared to 54% of the commuter students. Approximately 20% of both resident and commuter student participated in work-study programs.

Fifty-one percent of the resident students reported that they had no family responsibilities compared to 23% of the commuter students (see Table 2). Twenty-four percent of the resident students reported family responsibilities take some time or take a lot of time away from college work compared to 53% of the commuter students.

An analysis of the college program information of resident students compared to commuter students at Homestead Community College revealed differences in several areas. Resident students were more likely to be full-time students (12 credit hours or more) than commuter students. Eighty percent of resident students indicate that they are taking 12 or more credit hours during the current term compared to 67% of commuter students (see Table 3).

Commuter students were more likely to be part-time students (11 credit hours or less) than resident students. Thirty-three percent of commuter students indicated that they are taking 11 hours or less credit hours during the current term compared to 19% of resident students.

In terms of class meeting times, the resident students and commuter students were similar (see Table 3). Overall, 60% of students attended day classes only, 6 % attended evening classes only, and 33% attended a combination of day and evening classes.

In terms of grades at this college, 32% of resident students reported maintaining a B+ grade average or higher compared to 53% of the commuter students. Thirty-two percent of the resident students reported grades between the B-/C+ average compared to 17% of the commuter students (see Table 3).

Table 3 College Program Information

Item	Group					
	All Students		Resident		Commuter	
	<i>N</i>	%	<i>n</i>	%	<i>n</i>	%
Number of Credits Taking in Current Term	911		177		734	
Less Than 6	36	4%	6	3%	30	4%
6-8	106	12%	11	6%	95	13%
9-11	136	15%	19	11%	117	16%
12-15	532	58%	115	65%	417	57%
More Than 15	101	11%	26	15%	75	10%
Number of Credits Completed At This College	906		177		729	
1-15	134	15%	36	20%	98	13%
16-30	300	33%	78	44%	222	30%
31-45	190	21%	24	14%	166	23%
46 or More	282	31%	39	22%	243	33%
Meeting Times Of Classes	912		176		736	
Day Only	549	60%	100	57%	449	61%
Evening Only	59	6%	8	5%	51	7%
Some Day and Some Evening	304	33%	68	39%	236	32%
Most Grades At This College	909		176		733	
A	143	16%	9	5%	134	18%
A-, B+	302	33%	48	27%	254	35%
B	209	23%	38	22%	171	23%
B-, C+	181	20%	56	32%	125	17%
C, C-	48	5%	15	9%	33	5%
Lower Than C-	10	1%	6	3%	4	1%
No Grades, First Term	16	2%	4	2%	12	2%

Table 3 College Program Information
(continued).

Item	Group					
	All Students		Resident		Commuter	
	<i>N</i>	%	<i>n</i>	%	<i>n</i>	%
Hours Per Week Spent Studying Or Preparing For Classes	910		177		733	
1-5 Hours	382	42%	98	55%	284	39%
6-10 Hours	305	34%	49	28%	256	35%
11-15 Hours	122	13%	16	9%	106	14%
16-20 Hours	62	7%	8	5%	54	7%
More Than 20 Hours	39	4%	6	3%	33	5%
Hours Per Week Spent On Campus, Not In Class	910		177		733	
None	230	25%	34	19%	196	27%
1-3 Hours	358	39%	62	35%	296	40%
4-6 Hours	128	14%	21	12%	107	15%
7-9 Hours	69	8%	25	14%	44	6%
10-12 Hours	50	5%	14	8%	36	5%
More Than 12 Hours	75	8%	21	12%	54	7%
More Important Reason For Attending Current College At This Time	912		177		735	
Prepare To Transfer	267	29%	83	47%	184	25%
Skills For New Job	580	64%	76	43%	504	69%
Stay Current – Advance	50	5%	15	8%	35	4%
Personal Interest	10	1%	2	1%	8	1%
Improve Basic Skills	5	1%	1	1%	4	1%

In terms of hours per week spent studying students or preparing for classes, the resident students indicated spending less time studying or preparing for classes than commuter students. Fifty-five percent of resident students reported spending five hours or less studying or preparing for classes compared to 39% of the commuter students (see Table 3).

Commuter students indicated they spend less time on campus and not in class, than resident students. Sixty-seven percent of commuter students reported spending 3 hours or less on campus (not in class) compared to 54 % of resident students (see Table 3). Thirty-four percent of resident students reported spending seven hours or more on campus (not in class) compared to 18% of commuter students.

Resident students reported the more important reasons for attending current college at this time were preparing to transfer (47%) and skills for a new job (43%) compared to 25% (transfer) and 69% (skills) for the commuter student (see Table 3).

Table 4 College Courses

Item	Group					
	All Students		Resident		Commuter	
	<i>N</i>	%	<i>n</i>	%	<i>n</i>	%
Working On AA Degree	899		177		722	
Yes	386	43%	72	41%	314	43%
No	513	57%	105	59%	408	57%
Working On AS Degree	899		176		723	
Yes	356	40%	69	39%	287	40%
No	543	60%	107	61%	436	60%

Table 4 College Courses
(continued)

Item	Group					
	All Students		Resident		Commuter	
	<i>N</i>	%	<i>n</i>	%	<i>n</i>	%
Working On Diploma	896		176		720	
Yes	352	39%	63	36%	289	40%
No	544	61%	113	64%	431	60%
Working For A Certificate	901		176		725	
Yes	242	27%	52	30%	190	26%
No	659	73%	124	70%	535	74%
Plan To Transfer To 4-Year Program	904		177		727	
Yes	390	43%	103	58%	287	39%
No	514	57%	74	42%	440	61%
Enrolled In Vocational Program	903		176		727	
Yes	373	41%	70	40%	303	42%
No	530	59%	106	60%	424	58%
Name Of Vocational Program	905		177		728	
Not Enrolled	456	50%	94	53%	362	50%
Agricultural	10	1%	6	3%	4	1%
Business	25	3%	11	6%	14	2%
Management/Distribution	7	1%	1	1%	6	1%
Health	340	38%	42	24%	298	41%
Home Economics	7	1%	3	2%	4	1%
Technical/Communications	16	2%	6	3%	10	1%
Trade/Industrial	19	2%	5	3%	14	2%
Other	25	3%	9	5%	16	2%

The differences continue (see Table 4) when comparing resident students' and commuter students' plans to transfer to a 4-year college program. Fifty-eight percent of resident students plan to transfer, as compared to 39% of commuter students. When naming a specific program, half of the students (53% and 50%) identified they were not enrolled in a vocational program. Only one major difference between these groups exists between reported vocational majors. Twenty-four percent of the resident students reported enrolled in health programs, as compare to 41% of commuter students.

In terms of student working towards and AA or AS degree, diploma, or certificate, there were no major differences between these groups (see Table 4). Both resident students and commuter students have reported similar academic goals in these areas.

Analysis of Results by Research Question

The three research questions focused on examining if there were differences between resident students and commuter students regarding their reported levels of involvement in college activities, in their perceptions of gains or progress towards educational goals, and in their reported levels of satisfaction of the college environment. In these three areas, the mean scores for both groups (resident students and commuter students) were compared to determine if there were significant differences between these groups.

The analysis for each of the three research questions is reported separately. A MANOVA is reported for each categorical grouping pertaining to the three research questions. The MANOVAs examined the effect of residence (living on-campus or off-campus) on these three areas (involvement in activities, educational gains, and satisfaction with the college environment). When significant effects were found, the statistically significant *t*-tests were reported for the individual items for this group.

Research Question 1: Is there a statistically significant difference between resident students (students who live in on-campus apartments) and commuter students (students who do not live in on-campus apartments) in terms of their reported levels of involvement in college activities?

The resident students' and commuter students' data from the *CCSEQ* scores on the eight "Quality of Effort" scales were compared to explore the levels of involvement in college activities of both resident students and commuter students. A MANOVA was calculated to examine the effect of residence (living on-campus or off-campus) on "Quality of Effort" scales. A statistically significant effect was found ($\text{Lambda}(8,813) = 17.479, p = .001$) (see Table 5). Follow-up independent *t* tests comparing the mean scores of the resident and commuter student groups found statistically significant differences between the means of the two groups in the following Quality of Effort scales: Library, Faculty, Student Acquaintances, Art-Music-Theater, and Computer Technology (see Table 5). The *t* test results for the "Quality of Effort" scales for these five areas with statistically significant differences between the groups and the individual activities follow.

Quality of Effort: Library Activities

An independent *t* test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the means of these two groups ($t(899) = 5.457, p = .001$). The mean of the resident group was significantly higher ($M = 14.59, SD = 4.678$) than the mean of the commuter group ($M = 12.49, SD = 4.011$). Resident students reported significantly greater and more diverse amounts of involvement and effort in library activities than did commuter students. The *t* tests for the individual items within this grouping (LIB 1 - 7) found statistically significant item differences between the resident and commuter

students (see Table 6). Although there were significant differences, the average rate of participation in library activities was only “occasionally.”

Table 5 College Activities: Quality of Effort Scales

MANOVA	<i>F</i>		Hypothesis df		Error df	<i>p</i>	
OVERALL	17.479		8		813	.001 *	
SCALE	GROUP				<i>t</i> -Test Results		
	Resident		Commuter		df	<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
QE: Course Learning	24.32	5.360	24.80	5.562	886	-1.021	.297
QE: Library	14.59	4.678	12.49	4.011	899	5.457	.001 *
QE: Faculty	19.54	5.393	17.96	5.028	889	3.663	.001 *
QE: Student Acquaintances	13.88	4.513	12.03	4.296	898	5.062	.001 *
QE: Art, Music, Theater	14.24	5.554	11.30	3.038	897	5.769	.001 *
QE: Writing	21.49	5.399	21.01	5.419	892	1.051	.294
QE: Science	20.86	8.222	20.60	7.393	893	.370	.711
QE: Computer Technology	18.09	5.787	16.70	5.450	877	2.975	.003 *

* $p < .05$ indicates a significant statistical difference between groups.

Table 6 College Activities: Library Activities

QUESTION	GROUP				<i>t</i> -Test Results		
	Resident		Commuter				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	df	<i>t</i>	<i>p</i>
Used Library As A Quiet Place (LIB 1)	2.25	.999	2.14	.984	905	1.335	.182
Read Newspaper and Other Resources Located In Library (LIB 2)	2.13	.888	1.79	.825	904	4.801	.001 *
Checked Out Books (LIB 3)	2.01	.908	1.67	.789	905	4.947	.001 *
Used Card Catalogue (LIB 4)	2.04	.894	1.77	.769	903	4.112	.001 *
Prepared References For Paper (LIB 5)	2.09	.894	1.83	.765	904	3.592	.001 *
Asked Librarian For Help (LIB 6)	2.21	.911	1.80	.734	902	5.543	.001 *
Found Material By Browsing (LIB 7)	1.93	.957	1.52	.728	904	5.332	.001 *

* $p < .05$ indicates a significant statistical difference between groups

Read newspapers, magazines, or journals located in the library or on-line (LIB 2). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(904) = 4.801, p = .001$). The mean of the resident student group was significantly higher ($M = 2.13, SD = .888$) than the mean of the commuter group ($M = 1.79, SD = .825$). Resident students significantly more often read newspapers, magazines, or journals located in the library or on-line than did commuter students (see Table 6).

Checked out books and other materials to read at home (LIB 3). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(905) = 4.947, p = .001$). The mean of the resident student group was significantly higher ($M = 2.01, SD = .908$) than the mean of the commuter group ($M = 1.67, SD = .789$). Resident students significantly more often checked out books and other materials to read at home than did commuter students (see Table 6).

Used the card catalogue or computer to find materials the library had on a topic (LIB 4). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(903) = 4.112, p = .001$). The mean of the resident student group was significantly higher ($M = 2.04, SD = .894$) than the mean of the commuter group ($M = 1.77, SD = .769$). Resident students significantly more often used the card catalogue or computer to find materials the library had on a topic than did commuter students (see Table 6).

Prepared a bibliography or set of references for a term paper (LIB 5). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(904) = 3.592, p = .001$). The mean of the resident student group was significantly higher ($M = 2.09, SD = .894$) than the mean of the commuter group ($M = 1.83, SD = .765$). Resident students significantly more often prepared a bibliography or set of references for a term paper than did commuter students (see Table 6).

Asked the librarian for help in finding materials on some topic (LIB 6). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(902) = 5.543, p = .001$). The mean of the resident student group was significantly higher ($M = 2.21, SD = .911$) than the mean

of the commuter group ($M = 1.80$, $SD = .734$). Resident students significantly more often asked the librarian for help in finding materials on some topic than did commuter students (see Table 6).

Found some interesting material to read just by browsing in the stacks (LIB 7). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(904) = 5.332$, $p = .001$). The mean of the resident student group was significantly higher ($M = 1.93$, $SD = .957$) than the mean of the commuter group ($M = 1.52$, $SD = .728$). Resident students significantly more often found some interesting material to read just by browsing in the stacks than did commuter students (see Table 6).

Quality of Effort: Faculty

An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the means of these two groups ($t(889) = 3.663$, $p = .001$). The mean of the resident group was significantly higher ($M = 19.54$, $SD = 5.393$) than the mean of the commuter group ($M = 17.96$, $SD = 5.028$). Resident students reported significantly greater and more diverse amounts of involvement and effort with faculty than did commuter students. The t tests for the individual items within this group (FAC 1 - 9) found statistical significant item differences between the resident and commuter students (see Table 7). Although there were significant differences, the average rate of participation in these activities was only “occasionally.”

Made an appointment to meet with an instructor in his/her office (FAC 3). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(903) = 4.239$, $p = .001$). The

Table 7 College Activities: Engagement with Faculty

QUESTION	GROUP				<i>t</i> -Test Results		
	Resident		Commuter		df	<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Asked Instructor For Information (FAC 1)	2.50	.833	2.41	.716	904	1.428	.154
Talked Briefly With Instructor (FAC 2)	2.36	.843	2.23	.769	903	1.771	.078
Made Appointment To Meet With Instructor (FAC 3)	2.01	.819	1.73	.783	903	4.239	.001 *
Discussed Paper Ideas With Instructor (FAC 4)	2.13	.849	1.88	.758	900	3.526	.001 *
Discussed Career Plans With Instructor (FAC 5)	2.16	.876	2.02	.823	899	1.986	.048 *
Discussed Comments Made On Test Or Paper (FAC 6)	2.16	.887	1.91	.756	900	3.373	.001 *
Talked Informally With Instructor (FAC 7)	2.07	.905	1.98	.841	902	1.166	.245
Discussed Personal Issues With Instructor (FAC 8)	2.00	.938	1.82	.765	902	2.416	.016 *
Used E-Mail With Faculty (FAC 9)	2.15	.916	1.97	.889	900	2.481	.013 *
* $p < .05$ indicates a significant statistical difference between groups.							

mean of the resident student group was significantly higher ($M = 2.01$, $SD = .819$) than the mean of the commuter group ($M = 1.73$, $SD = .783$). Resident students significantly more often made an appointment to meet with an instructor in his/her office than did commuter students (see Table 7).

Discussed ideas for a term paper or other class project with an instructor (FAC 4). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(900) = 3.526, p = .001$). The mean of the resident student group was significantly higher ($M = 2.13, SD = .849$) than the mean of the commuter group ($M = 1.88, SD = .758$). Resident students significantly more often discussed ideas for a term paper or other class project with an instructor than did commuter students (see Table 7).

Discussed your career and/or educational plans, interest, and ambitions with an instructor (FAC 5). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(899) = 1.986, p = .048$). The mean of the resident student group was significantly higher ($M = 2.16, SD = .876$) than the mean of the commuter group ($M = 2.02, SD = .823$). Resident students significantly more often discussed their career and/or educational plans, interest, and ambitions with an instructor than did commuter students (see Table 7).

Discussed comments an instructor made on a test or paper you wrote (FAC 6). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(900) = 3.373, p = .001$). The mean of the resident student group was significantly higher ($M = 2.16, SD = .877$) than the mean of the commuter group ($M = 1.91, SD = .756$). Resident students significantly more often discussed comments an instructor made on a test or paper you wrote than did commuter students (see Table 7).

Discussed your school performance, difficulties or personal problems with an instructor (FAC 8). An independent t test comparing the mean scores of the resident and

commuter student groups found a statistically significant difference between the two groups ($t(902) = 2.416, p = .016$). The mean of the resident student group was significantly higher ($M = 2.00, SD = .938$) than the mean of the commuter group ($M = 1.82, SD = .765$). Resident students significantly more often discussed their school performance, difficulties, or personal problems with an instructor than did commuter students (see Table 7).

Used electronic mail (E-mail) to communicate with your instructor (FAC 9). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(900) = 2.481, p = .013$). The mean of the resident student group was significantly higher ($M = 2.15, SD = .916$) than the mean of the commuter group ($M = 1.97, SD = .889$). Resident students significantly more often used electronic mail (E-mail) to communicate with their instructor than did commuter students (see Table 7).

Quality of Effort: Student Acquaintances

An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the means of these two groups ($t(898) = 5.062, p = .001$). The mean of the resident group was significantly higher ($M = 13.88, SD = 4.513$) than the mean of the commuter group ($M = 12.03, SD = 4.296$). Resident students significantly reported greater and more diverse amounts of involvement and effort with student acquaintances than did commuter students. The t tests for the individual items within this group (ST ACQ 1 - 6) found statistical significant item differences between the resident and commuter students (see Table 8). Although there were significant differences, the average rate of participation in student acquaintances activities was only “occasionally.”

Table 8 College Activities: Student Acquaintances

QUESTION	GROUP				<i>t</i> -Test Results		
	Resident		Commuter		df	<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Talked With Students: Different Age (St Acq 1)	2.31	.931	2.32	.933	903	-.073	.942
Different Ethnicity (St Acq 2)	2.47	.937	2.03	.884	903	5.559	.001 *
Different Values (St Acq 3)	2.33	.922	2.12	.869	903	2.797	.006 *
Different Politics (St Acq 4)	2.19	.948	1.91	.844	899	3.641	.001 *
Different Religions (St Acq 5)	2.22	.937	1.94	.894	903	3.698	.001 *
Different Countries (St Acq 6)	2.36	1.033	1.73	.845	903	7.606	.001 *

* $p < .05$ indicates a significant statistical difference between groups.

Had serious discussions with students whose ethnic or cultural background was different from yours (ST ACQ 2). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(903) = 5.559, p = .001$). The mean of the resident student group was significantly higher ($M = 2.47, SD = .937$) than the mean of the commuter group ($M = 2.03, SD = .884$). Resident students significantly more often had serious discussions with students whose ethnic or cultural background was different from theirs than did commuter students (see Table 8).

Had serious discussions with students whose philosophy of life or personal values were very different from yours (ST ACQ 3). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(903) = 2.797, p = .006$). The mean of the resident student group was significantly higher ($M = 2.33, SD = .922$) than the mean of the commuter group ($M = 2.12, SD = .869$). Resident students significantly more often had serious discussions with students whose philosophy of life or personal values were very different from theirs than did commuter students (see Table 8).

Had serious discussions with students whose political opinions were very different from yours (ST ACQ 4). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(899) = 3.641, p = .001$). The mean of the resident student group was significantly higher ($M = 2.19, SD = .948$) than the mean of the commuter group ($M = 1.91, SD = .844$). Resident students significantly more often had serious discussions with students whose political opinions were very different from theirs than did commuter students (see Table 8).

Had serious discussions with students whose religious beliefs were different from yours (ST ACQ 5). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(903) = 3.698, p = .001$). The mean of the resident student group was significantly higher ($M = 2.22, SD = .937$) than the mean of the commuter group ($M = 1.94, SD = .894$). Resident students significantly more often had serious discussions with students whose religious beliefs were very different from theirs than did commuter students (see Table 8).

Had serious discussions with students from a country different from yours (ST ACQ 6).

An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(903) = 7.606, p = .001$).

The mean of the resident student group was significantly higher ($M = 2.36, SD = 1.033$) than the mean of the commuter group ($M = 1.73, SD = .845$). Resident students significantly more often had serious discussions with students from a country different from theirs than did commuter students (see Table 8).

Quality of Effort: Art, Music, and Theater Activities

An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the means of these two groups ($t(897) = 5.769, p = .001$). The mean of the resident group was significant higher ($M = 14.24, SD = 5.554$) than the mean of the commuter group ($M = 11.30, SD = 3.038$). Resident students reported significantly greater and more diverse amounts of involvement and effort in art, music, and theater activities than did commuter students. The t tests for the individual items within this group (AMT 1 -9) found statistical significant item differences between the resident and commuter students (see Table 9). Although there were significant differences, the average rate of participation in art, music, and theater activities was “never” to only “occasionally.”

Talked about art (painting, sculpture, architecture, artists, etc.) with other students at the college (AMT 1). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(904) = 5.099, p = .001$). The mean of the resident student group was significantly higher ($M = 1.66, SD = .853$) than the mean of the commuter group ($M = 1.32, SD = .582$). Resident

Table 9 College Activities: Art, Music, and Theater (AMT)

QUESTION	GROUP				<i>t</i> -Test Results		
	Resident		Commuter				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	df	<i>t</i>	<i>P</i>
Talked About Art With Other Students (AMT 1)	1.66	.853	1.32	.582	904	5.099	.001 *
Talked About Music With Other Students (AMT 2)	2.04	.940	1.69	.765	904	4.523	.001 *
Talked About Theater With Other Students (AMT 3)	1.63	.834	1.27	.548	904	5.741	.001 *
Attended Art Exhibit On Campus (AMT 4)	1.48	.778	1.19	.462	902	4.665	.001 *
Attended Concert On Campus (AMT 5)	1.59	.774	1.22	.499	903	5.890	.001 *
Attended Theater On Campus (AMT 6)	1.58	.826	1.23	.490	903	5.337	.001 *
Participated In AMT On-Campus (AMT 7)	1.44	.826	1.11	.384	902	5.218	.001 *
Attended Off-Campus AMT Event For Credit (AMT 8)	1.44	.826	1.17	.471	902	4.112	.001 *
Participated Off-Campus AMT Event For Credit (AMT 9)	1.37	.797	1.10	.359	903	4.466	.001 *

* $p < .05$ indicates a significant statistical difference between groups.

students significantly more often talked about art (painting, sculpture, architecture, artists, etc.) with other students at the college than did commuter students (see Table 9).

Talked about music (classical, popular, musicians, etc.) with other students at the college (AMT 2). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(904) = 4.523, p = .001$). The mean of the resident student group was significantly higher

($M = 2.04$, $SD = .940$) than the mean of the commuter group ($M = 1.69$, $SD = .765$). Resident students significantly more often talked about music (classical, popular, musicians, etc.) with other students at the college than did commuter students (see Table 9).

Talked about the theater (plays, musicals, dance, etc.) with other students at the college (AMT 3). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(904) = 5.741$, $p = .001$). The mean of the resident student group was significantly higher ($M = 1.63$, $SD = .834$) than the mean of the commuter group ($M = 1.27$, $SD = .548$). Resident students significantly more often talked about theater (plays, musicals, dance, etc.) with other students at the college than did commuter students (see Table 9).

Attended an art exhibit on the campus (AMT 4). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(902) = 4.665$, $p = .001$). The mean of the resident student group was significantly higher ($M = 1.48$, $SD = .778$) than the mean of the commuter group ($M = 1.19$, $SD = .462$). Resident students significantly more often attended an art exhibit on campus than did commuter students (see Table 9).

Attended a concert or other musical event at the college (AMT 5). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(903) = 5.890$, $p = .001$). The mean of the resident student group was significantly higher ($M = 1.59$, $SD = .774$) than the mean of the commuter group ($M = 1.22$, $SD = .499$). Resident students significantly more often attended a concert or other musical event at the college than did commuter students (see Table 9).

Attended a play, dance, concert, or other theatre performance at the college (AMT 6).

An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(903) = 5.337, p = .001$). The mean of the resident student group was significantly higher ($M = 1.58, SD = .826$) than the mean of the commuter group ($M = 1.23, SD = .490$). Resident students significantly more often attended a play, dance, concert, or other theatre performance at the college than did commuter students (see Table 9).

Participated in an art exhibit, musical event, or theatre performance at the college (AMT 7). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(902) = 5.218, p = .001$). The mean of the resident student group was significantly higher ($M = 1.44, SD = .826$) than the mean of the commuter group ($M = 1.11, SD = .384$). Resident students significantly more often participated in an art exhibit, musical event, or theatre performance at the college than did commuter students (see Table 9).

Attended an off-campus art exhibit, musical event, or theatre performance for course credit (AMT 8). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(902) = 4.112, p = .001$). The mean of the resident student group was significantly higher ($M = 1.44, SD = .826$) than the mean of the commuter group ($M = 1.17, SD = .471$). Resident students significantly more often attended an off-campus art exhibit, musical event, or theatre performance for course credit than did commuter students (see Table 9).

Participated in an off-campus art exhibit, musical event, or theatre performance for course credit (AMT 9). An independent t test comparing the mean scores of the resident and

commuter student groups found a statistically significant difference between the two groups ($t(903) = 4.466, p = .001$). The mean of the resident student group was significantly higher ($M = 1.37, SD = .797$) than the mean of the commuter group ($M = 1.10, SD = .359$). Resident students significantly more often participated in an off-campus art exhibit, musical event, or theatre performance for course credit than did commuter students (see Table 9).

Quality of Effort: Computer Technology

An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the means of these two groups ($t(877) = 2.975, p = .003$). The mean of the resident group was significant higher ($M = 18.09, SD = 5.787$) than the mean of the commuter group ($M = 16.70, SD = 5.450$). Resident students reported significantly greater and more diverse amounts of involvement and effort with computer technology than did commuter students. The t tests for the individual items within this group (COMP 1 - 8) found statistical significant item differences between the resident and commuter students (see Table 10). Although there were significant differences, the average rate of participation in computer technology activities was only “occasionally.”

Used a computer tutorial to learn material for a course or remedial program (COMP 3). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(887) = 2.467, p = .014$). The mean of the resident student group was significantly higher ($M = 2.26, SD = .955$) than the mean of the commuter group ($M = 2.05, SD = 1.013$). Resident students significantly more often used a computer tutorial to learn material for a course or remedial program than did commuter students (see Table 10).

Table 10 College Activities: Computer Technology

QUESTION	GROUP				<i>t</i> -Test Results		
	Resident		Commuter		df	<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Used E-Mail About Courses (Comp 1)	2.40	1.004	2.30	1.054	888	1.227	.220
Used Web For Project Or Paper (Comp 2)	2.88	.978	2.98	.934	887	-1.346	.179
Used Tutorial (Comp 3)	2.26	.955	2.05	1.013	887	2.467	.014 *
Used Computer In Group Learning (Comp 4)	2.19	.966	2.05	.984	887	1.780	.075
Did Database Management (Comp 5)	2.11	.971	1.88	.932	886	2.839	.005 *
Analyzed Data (Comp 6)	2.21	1.068	1.98	.937	882	2.559	.011 *
Created Graphs Or Charts (Comp 7)	2.19	1.035	1.96	.952	887	2.743	.007 *
Wrote A Computer Application (Comp 8)	1.84	1.053	1.50	.856	884	7.242	.001 *

* $p < .05$ indicates a significant statistical difference between groups.

Used a computer for some type of database management (COMP 5). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(886) = 2.839, p = .005$). The mean of the resident student group was significantly higher ($M = 2.11, SD = .971$) than the mean of the commuter group ($M = 1.88, SD = .932$). Resident students significantly more often used a computer for some type of database management than did commuter students (see Table 10).

Used a computer to analyze data for a class project (COMP 6). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(882) = 2.559, p = .011$). The mean of the resident student group was significantly higher ($M = 2.21, SD = 1.068$) than the mean of the commuter group ($M = 1.98, SD = .937$). Resident students significantly more often used a computer to analyze data for a class project than did commuter students (see Table 10).

Used a computer to create graphs or charts for a class project (COMP 7). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(887) = 2.743, p = .007$). The mean of the resident student group was significantly higher ($M = 2.19, SD = 1.035$) than the mean of the commuter group ($M = 1.96, SD = .952$). Resident students significantly more often used a computer to create graphs or charts for a class project than did commuter students (see Table 10).

Wrote an application using existing software or programming (COMP 8). An independent t test comparing the mean scores of the resident and commuter student group found a statistically significant difference between the two groups ($t(884) = 7.242, p = .001$). The mean of the resident student group was significantly higher ($M = 1.84, SD = 1.053$) than the mean of the commuter group ($M = 1.50, SD = .856$). Resident students significantly more often wrote an application using existing software or programming than did commuter students (see Table 10).

College Activities: Additional Areas

Learning and Study Skills

Is there a statistically significant difference between resident students (students who live in on-campus apartments) and commuter students (students who do not live in on-campus apartments) in terms of their reported levels of involvement in learning and study skills? The resident students' and commuter students' data from CCSEQ scores on the nine learning and study skills areas were compared to explore the levels of involvement of both resident students and commuter students. A MANOVA was calculated to examine the effect of residence (living on-campus or off-campus) on the amount of instruction they have received in learning and study skills. A statistically significant effect was found ($\text{Lambda}(9,890) = 3.403, p = .001$) (see Table 11). Follow-up independent t tests comparing the mean scores of the resident and .commuter student groups found statistically significant differences between the mean scores of the two groups in all learning and study skills areas (See Table 12). Although there were significant differences, the average out-of-class instruction received in learning and study skills areas was "none" to only "some" for the resident students and "none" for the commuter students

Memory Skills (LSS 1). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the means of the two groups ($t(903) = 4.449, p = .001$). The mean of the resident student group was significantly higher ($M = 1.54, SD = .667$) than the mean of the commuter group ($M = 1.20, SD = .537$). Resident students received significantly more out-of-class instruction in memory skills than did commuter students (see Table 12).

Table 11 College Activities: Additional Areas

MANOVA	<i>F</i>	Hypothesis df	Error df	<i>P</i>
Career/Occupational Skills (OCC 1-9)	6.620	9	754	.478
Learning and Study Skills (LSS 1-9)	3.403	9	890	.001 *
Athletic Activities (ATH 1-6)	34.532	6	890	.001 *
Clubs and Organizations (ORG 1-7)	18.672	7	880	.001 *
Counseling and Career Planning (CCP 1-8)	7.653	8	873	.001 *

* $p < .05$ indicates a significant statistical difference between groups.

Note Taking Skills (LSS 2). An independent t test comparing the mean scores of the resident and commuter student group found a statistically significant difference between the two groups ($t(902) = 4.173, p = .001$). The mean of the resident student group was significantly higher ($M = 1.56, SD = .675$) than the mean of the commuter group ($M = 1.33, SD = .583$). Resident students received significantly more out-of-class instruction in note taking skills than did commuter students (see Table 12).

Listening Skills (LSS 3). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(903) = 4.173, p = .001$). The mean of the resident student group was significantly

Table 12 College Activities: Out-of-Class Instruction in Learning and Study Skills

SKILLS	GROUP				<i>t</i> -Test Results		
	Resident		Commuter				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	df	<i>t</i>	<i>p</i>
Received Instruction: Memory Skills (LSS 1)	1.54	.667	1.20	.537	903	4.449	.001 *
Note Taking Skills (LSS 2)	1.56	.675	1.33	.583	902	4.173	.001 *
Listening Skills (LSS 3)	1.57	.715	1.33	.605	903	4.173	.001 *
Speaking Skills (LSS 4)	1.49	.651	1.32	.588	904	3.235	.001 *
Writing Skills (LSS 5)	1.58	.697	1.35	.611	904	4.034	.001 *
Reading Skills (LSS 6)	1.51	.668	1.27	.552	903	4.355	.001 *
Test Taking Skills (LSS 7)	1.54	.692	1.31	.543	904	4.070	.001 *
Time Management Skills (LSS 8)	1.57	.682	1.33	.577	904	4.384	.001 *
Problem Solving Skills (LSS 9)	1.54	.676	1.33	.576	904	3.821	.001 *
* <i>p</i> < .05 indicates a significant statistical difference between groups.							

higher ($M = 1.57$, $SD = .715$) than the mean of the commuter group ($M = 1.33$, $SD = .605$).

Resident students received significantly more out-of-class instruction in listening skills than did commuter students (see Table 12).

Speaking Skills (LSS 4). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two

groups ($t(904) = 3.235, p = .001$). The mean of the resident student group was significantly higher ($M = 1.49, SD = .651$) than the mean of the commuter group ($M = 1.32, SD = .588$). Resident students received significantly more out-of-class instruction in speaking skills than did commuter students (see Table 12).

Writing Skills (LSS 5). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(904) = 4.034, p = .001$). The mean of the resident student group was significantly higher ($M = 1.58, SD = .697$) than the mean of the commuter group ($M = 1.35, SD = .611$). Resident students received significantly more out-of-class instruction in writing skills than did commuter students (see Table 12).

Reading Skills (LSS 6). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(903) = 4.355, p = .001$). The mean of the resident student group was significantly higher ($M = 1.51, SD = .668$) than the mean of the commuter group ($M = 1.27, SD = .552$). Resident students received significantly more out-of-class instruction in reading skills than did commuter students (see Table 12).

Test Taking Skills (LSS 7). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(904) = 4.070, p = .001$). The mean of the resident student group was significantly higher ($M = 1.54, SD = .692$) than the mean of the commuter group ($M = 1.31, SD = .543$). Resident students received significantly more out-of-class instruction in test taking skills than did commuter students (see Table 12).

Time Management Skills (LSS 8). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(904) = 4.384, p = .001$). The mean of the resident student group was significantly higher ($M = 1.57, SD = .682$) than the mean of the commuter group ($M = 1.33, SD = .577$). Resident students received significantly more out-of-class instruction in time management skills than did commuter students (see Table 12).

Problem Solving Skills (LSS 9). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(904) = 3.821, p = .001$). The mean of the resident student group was significantly higher ($M = 1.54, SD = .676$) than the mean of the commuter group ($M = 1.33, SD = .576$). Resident students received significantly more out-of-class instruction in problem solving skills than did commuter students (see Table 12).

Athletic Activities

Is there a statistically significant difference between resident students (students who live in on-campus apartments) and commuter students (students who do not live in on-campus apartments) in terms of their reported levels of involvement in athletic activities? The resident students' and commuter students' data from the *CCSEQ* scores on the six athletic activities were compared to explore the levels of involvement of both resident students and commuter students. A MANOVA was calculated to examine the effect of residence (living on-campus or off-campus) on the amount of involvement in athletic activities. A statistically significant effect was found ($\text{Lambda}(6,890) = 34.532, p = .001$) (see Table 11). Follow-up independent t tests comparing the mean scores of the resident and commuter student groups found statistically significant differences between the mean scores of the two groups in the following athletic

activities (see Table 13). Although there were significant differences, the average rate of participation in athletic activities was only “occasionally” for the resident students and “never” for the commuter students.

Followed a regular exercise program on campus (ATH 1). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(901) = 9.187, p < .001$). The mean of the

Table 13 College Activities: Athletics

QUESTION	GROUP				<i>t</i> -Test Results		
	Resident		Commuter				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	df	<i>t</i>	<i>p</i>
Followed Exercise Schedule On-Campus (Ath 1)	2.36	1.130	1.52	.850	901	9.187	.001 *
Sought Athletic Instruction (Ath 2)	1.92	1.058	1.27	.624	901	7.749	.001 *
Attended Athletic Event On-Campus (Ath 3)	2.17	1.108	1.41	.791	900	8.568	.001 *
Coached Youth Program On-Campus (Ath 4)	1.57	1.001	1.09	.395	902	6.269	.001 *
Coached Off-Campus (Ath 5)	1.53	.938	1.09	.396	900	6.022	.001 *
Participated In Sport On-Campus (Ath 6)	1.86	1.156	1.17	.580	901	7.692	.001 *

* $p < .05$ indicates a significant statistical difference between groups.

resident student group was significantly higher ($M = 2.36$, $SD = 1.130$) than the mean of the commuter group ($M = 1.52$, $SD = .850$). Resident students significantly more often followed a regular exercise program on campus than did commuter students (see Table 13).

Sought athletic instruction (ATH 2). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(901) = 7.749$, $p = .001$). The mean of the resident student group was significantly higher ($M = 1.92$, $SD = 1.058$) than the mean of the commuter group ($M = 1.27$, $SD = .624$). Resident students significantly more often sought athletic instruction than did commuter students (see Table 13).

Attended an athletic event on campus (ATH 3). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(900) = 8.568$, $p = .001$). The mean of the resident student group was significantly higher ($M = 2.17$, $SD = .1.108$) than the mean of the commuter group ($M = 1.41$, $SD = .791$). Resident students significantly more often attended an athletic event on campus than did commuter students (see Table 13).

Coached or assisted with youth athletic programs on campus (ATH 4). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(902) = 6.269$, $p = .001$). The mean of the resident student group was significantly higher ($M = 1.57$, $SD = 1.001$) than the mean of the commuter group ($M = 1.09$, $SD = .395$). Resident students significantly more often coached or assisted with youth athletic programs on campus than did commuter students (see Table 13).

Coached or assisted with off-campus youth athletic programs for course credit (ATH 5). An independent t test comparing the mean scores of the resident and commuter student

groups found a statistically significant difference between the two groups ($t(900) = 6.022$, $p = .001$). The mean of the resident student group was significantly higher ($M = 1.53$, $SD = .938$) than the mean of the commuter group ($M = 1.09$, $SD = .396$). Resident students significantly more often coached or assisted with off-campus youth athletic programs for course credit than did commuter student (see Table 13).

Participated in a sport on campus (ATH 6). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(901) = 7.692$, $p = .001$). The mean of the resident student group was significantly higher ($M = 1.86$, $SD = 1.156$) than the mean of the commuter group ($M = 1.17$, $SD = .580$). Resident students significantly more often participated in a sport on campus than did commuter students (see Table 13).

Clubs and Organizations

Is there a statistically significant difference between resident students (students who live in on-campus apartments) and commuter students (students who do not live in on-campus apartments) in terms of their reported levels of involvement in clubs and organizations? The resident students' and commuter students' data from the CCSEQ scores on the seven clubs and organizations items were compared to explore the levels of involvement of both resident students and commuter students. A MANOVA was calculated to examine the effect of residence (living on-campus or off-campus) on their involvement in clubs and organizations. A statistically significant effect was found ($\text{Lambda}(7,880) = 18.672$, $p = .001$) (see Table 11). Follow-up independent t tests comparing the mean scores of the resident and commuter student groups found statistically significant differences between the means of the two groups in all clubs and organizations activities (see Table 14). Although there were significant differences, the average

rate of participation in clubs and organizations activities was only “occasionally” for resident students and “never” for commuter students.

Looked at notices about campus events and student organizations (ORG 1). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(889) = 6.738, p = .001$). The mean of the resident student group was significantly higher ($M = 1.99, SD = .922$) than the mean

Table 14 College Activities: Clubs and Organizations

QUESTION	GROUP				<i>t</i> -Test Results		
	Resident		Commuter				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	df	<i>t</i>	<i>P</i>
Looked For Notices About Campus Events (Org 1)	1.99	.922	1.49	.644	889	6.738	.001 *
Read Or Asked About Club-Organization (Org 2)	1.87	.890	1.36	.577	888	8.242	.001 *
Attended Meeting Of Club Or Organization (Org 3)	1.73	.979	1.26	.608	888	6.013	.001 *
Had Leadership Role (Org 4)	1.57	.900	1.19	.567	888	5.288	.001 *
In Event Sponsored By Club (Org 5)	1.83	.995	1.27	.567	887	7.218	.001 *
In Off-Campus Event Sponsored By Club (Org 6)	1.55	.908	1.20	.526	888	4.923	.001 *
In Off-Campus Project Not With Club (Org 7)	1.54	.863	1.27	.605	889	3.917	.001 *

* $p < .05$ indicates a significant statistical difference between groups.

of the commuter group ($M = 1.49$, $SD = .644$). Resident students significantly more often looked at notices about campus events and student organizations than did commuter students (see Table 14).

Read or asked about a student club or organization (ORG 2). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(888) = 8.242$, $p = .001$). The mean of the resident student group was significantly higher ($M = 1.87$, $SD = .890$) than the mean of the commuter group ($M = 1.36$, $SD = .577$). Resident students significantly more often read or asked about a student club or organization than did commuter students (see Table 14).

Attended a meeting of a student club or organization (ORG 3). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(888) = 6.013$, $p = .001$). The mean of the resident student group was significantly higher ($M = 1.73$, $SD = .979$) than the mean of the commuter group ($M = 1.26$, $SD = .608$). Resident students significantly more often attended a meeting of a student club or organization than did commuter students (see Table 14).

Assumed a leadership role (held an office, headed a committee, etc.) (ORG 4). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(888) = 5.288$, $p = .001$). The mean of the resident student group was significantly higher ($M = 1.57$, $SD = .900$) than the mean of the commuter group ($M = 1.19$, $SD = .567$). Resident students significantly more often assumed a leadership role (held an office, headed a committee, etc.) than did commuter students (see Table 14).

Participated in a campus project or event sponsored by a student organization or club

(ORG 5). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(887) = 7.218, p = .001$). The mean of the resident student group was significantly higher ($M = 1.83, SD = .995$) than the mean of the commuter group ($M = 1.27, SD = .567$). Resident students significantly more often participated in a campus project or event sponsored by a student organization or club than did commuter students (see Table 14).

Participated in a project or event off-campus which was sponsored by a student organization or club (ORG 6). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(888) = 4.923, p = .001$). The mean of the resident student group was significantly higher ($M = 1.55, SD = .908$) than the mean of the commuter group ($M = 1.20, SD = .526$). Resident students significantly more often participated in a project or event off-campus which was sponsored by a student organization or club than did commuter students (see Table 14).

Participated in a project or event off-campus which was not sponsored by a student organization or club (ORG 7). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(889) = 3.917, p = .001$). The mean of the resident student group was significantly higher ($M = 1.54, SD = .863$) than the mean of the commuter group ($M = 1.27, SD = .605$). Resident students significantly more often participated in a project or event off-campus which was not sponsored by a student organization or club than did commuter students (see Table 14).

Counseling and Career Planning

Is there a statistically significant difference between resident students (students who live in on-campus apartments) and commuter students (students who do not live in on-campus apartments) in terms of their reported levels of involvement in counseling and career planning activities? The resident students' and commuter students' data from the CCSEQ scores on the eight counseling and career planning areas were compared to explore the levels of involvement of both resident students and commuter students. A MANOVA was calculated to examine the effect of residence (living on-campus or off-campus) on the levels of involvement in counseling and career planning activities. A statistically significant effect was found ($\text{Lambda}(8,873) = 7.653, p = .001$) (see Table 11). Follow-up independent t tests comparing the mean scores of the resident and commuter student groups found statistically significant differences between the means of the two groups in the following counseling and career planning activities (see Table 15). Although there were significant differences, the average rate of participation in counseling and career planning activities was only "occasionally."

Discussed your vocational interests, abilities, and ambitions with a counselor/advisor (CCP 2). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(886) = 2.592, p = .011$). The mean of the resident student group was significantly higher ($M = 2.19, SD = .886$) than the mean of the commuter group ($M = 2.00, SD = .877$). Resident students significantly more often discussed their vocational interests, abilities, and ambitions with a counselor/advisor than did commuter students.

Read information about a particular 4-year college or university that you were interested in attending (CCP 3). An independent t test comparing the mean scores of the

resident and commuter student groups found a statistically significant difference between the two groups ($t(887) = 6.152, p = .001$). The mean of the resident student group was significantly higher ($M = 2.39, SD = .968$) than the mean of the commuter group ($M = 1.90, SD = .941$). Resident students significantly more often read information about a particular 4-year college or university that they were interested in attending than did commuter students.

Table 15 College Activities: Counseling and Career Planning

QUESTION	GROUP				<i>t</i> -Test Results		
	Resident		Commuter				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	df	<i>t</i>	<i>P</i>
Talked With Counselor: Courses, Ed. Plans (CCP 1)	2.37	.953	2.33	.870	886	.551	.582
Discussed Vocational Interests (CCP 2)	2.19	.886	2.00	.877	886	2.592	.011 *
Read Information About 4- Year College (CCP 3)	2.39	.968	1.90	.941	887	6.152	.001 *
Read About Career Opportunities (CCP 4)	2.44	.866	2.42	.916	885	.241	.810
Made Appointment To Discuss Transfer (CCP 5)	1.88	.917	1.51	.802	887	4.798	.001 *
Identified General Ed. Requirements (CCP 6)	2.12	.970	1.81	.952	887	3.785	.001 *
Discussed Personal Matters (CCP 7)	2.05	.958	1.73	.822	887	4.436	.001 *
Took Interest Inventory (CCP 8)	1.71	.963	1.45	.760	885	3.282	.001 *

* $p < .05$ indicates a significant statistical difference between groups.

Made an appointment with a counselor or an advisor to discuss your plans for transferring to a 4-year college or university (CCP 5). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(887) = 4.798, p = .001$). The mean of the resident student group was significantly higher ($M = 1.88, SD = .917$) than the mean of the commuter group ($M = 1.51, SD = .802$). Resident students significantly more often made an appointment with a counselor or an advisor to discuss their plans for transferring to a four-year college or university than did commuter students (see Table 15).

Made an appointment with a counselor or an advisor to discuss your plans for transferring to a 4-year college or university (CCP 6). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(887) = 3.785, p = .001$). The mean of the resident student group was significantly higher ($M = 2.12, SD = .970$) than the mean of the commuter group ($M = 1.81, SD = .952$). Resident students significantly more often made an appointment with a counselor or an advisor to discuss their plans for transferring to a four-year college or university than did commuter students (see Table 15).

Talked with a counselor/advisor about personal matters related to your college performance (CCP 7). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(887) = 4.436, p = .001$). The mean of the resident student group was significantly higher ($M = 2.05, SD = .958$) than the mean of the commuter group ($M = 1.73, SD = .822$). Resident students significantly more often talked with a counselor/advisor about personal matters related to their college performance than did commuter students (see Table 15).

Have taken interest inventories or surveys (e.g. Strong-Campbell Interest Inventory, Kuder Occupational Interest Survey, etc.) to help you direct your career goals (CCP 8). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the two groups ($t(885) = 3.282, p = .001$). The mean of the resident student group was significantly higher ($M = 1.71, SD = .963$) than the mean of the commuter group ($M = 1.45, SD = .760$). Resident students significantly more often have taken interest inventories or surveys (e.g. Strong-Campbell Interest Inventory, Kuder Occupational Interest Survey, etc.) to help them direct their career goals than did commuter students (see Table 15).

Research Question 2: Is there a statistically significant difference between resident students (students who live in on-campus apartments) and commuter students (students who do not live in on-campus apartments) in terms of their perception of estimate of gains or progress towards educational goals? The resident students' and commuter students' data from the CCSEQ scores on the six areas of the "Estimate of Gains" section were compared to explore how much students have gained or made progress toward a series of 24 important educational goals. One additional item (Question 24), not considered part of the Estimate of Gains scale, will be compared using the t test. A MANOVA was calculated to examine the effect of residence (living on-campus or off-campus) on Estimate of Gains scales. A statistically significant effect was found ($\text{Lambda}(24,828) = 2.857, p = .001$.) (see Table 16). Six MANOVAs were calculated examining the effect of residence (living on-campus or off-campus) on the six areas of the Estimate of Gains Scale. A statistically significant effect was found for four of the six areas: Careers, Arts & Communication, Personal & Social Development, and Perspectives of the World (see Table 16). Follow-up independent t tests comparing the mean scores of the resident and

commuter student groups found statistically significant differences between the means of the two groups. The MANOVA results for the estimate of gains areas and *t* test results for the individual items follow for the statistically significant effects and differences found between the groups.

Table 16 Estimate of Educational Gains
MANOVA's

MANOVA	<i>F</i>	Hypothesis df	Error df	<i>P</i>
OVERALL	2.857	24	828	.001 *

QUESTIONS	<i>F</i>	Hypothesis df	Error df	<i>P</i>
Career (1-4)	3.348	4	882	.010 *
Arts & Communication (5-8)	7.291	4	880	.001 *
Computers (9, 10)	.185	2	892	.831
Personal & Social Development (11-13, 23, 25)	2.240	5	885	.048 *
Mathematics, Science, and Integrated Technology (14-17, 19)	1.421	5	883	.214
Perspectives of the World (18, 20-22)	7.360	4	885	.001 *

* $p < .05$ indicates a significant statistical difference between groups.

Estimate of Gains: Career

The resident students' and commuter students' data from the CCSEQ scores on the four items comprising the career area were compared to explore the students' perceived gains or progress they have made towards career goals. A MANOVA was calculated to examine the effect of residence (living on-campus or off-campus) on students' self-reported progress toward career preparation. A statistically significant effect was found ($\text{Lambda}(4,882) = 3.348$, $p < .010$) (see Table 16). Follow-up independent t tests for the individual items comparing the mean scores of the resident and commuter student groups found statistically significant differences between the groups (see Table 17). Although there were statistically significant differences, the average rate of gains or progress made in career goals was "quite a bit."

Table 17 Estimate of Educational Gains Relating to Career

QUESTION	GROUP				<i>t</i> -Test Results		
	Resident		Commuter				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>	<i>p</i>
Acquiring Skills For Specific Job (Car 1)	2.70	.983	2.91	.939	896	-2.685	.007 *
Gaining Info About Career Opportunities (Car 2)	2.64	.939	2.81	.872	894	-2.205	.028 *
Developing Clearer Career Goals (Car 3)	2.73	.891	2.88	.904	891	-2.014	.044 *
Learning About Different Fields Of Knowledge (Car 4)	2.47	.938	2.74	.902	889	-3.525	.001 *

* $p < .05$ indicates a significant statistical difference between groups.

Acquiring knowledge and skills applicable to a specific job or type of work (CAR 1).

An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the means of the two groups ($t(896) = -2.685$, $p = .007$). The mean of the commuter group was statistically higher ($M = 2.91$, $SD = .939$) than the mean of the resident group ($M = 2.70$, $SD = .983$). Commuter students perceived they significantly made more progress towards acquiring knowledge and skills applicable to a specific job or type of work than did resident students (see Table 17).

Gaining information about career opportunities (CAR 2). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the means of the two groups ($t(894) = -2.205$, $p = .028$). The mean of the commuter group was statistically higher ($M = 2.81$, $SD = .872$) than the mean of the resident group ($M = 2.64$, $SD = .939$). Commuter students perceived they significantly made more progress towards gaining information about career opportunities than did resident students (see Table 17).

Developing clearer goals (CAR 3). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the means of the two groups ($t(891) = -2.014$, $p = .044$). The mean of the commuter group was statistically higher ($M = 2.88$, $SD = .904$) than the mean of the resident group ($M = 2.73$, $SD = .891$). Commuter students perceived they significantly made more progress towards developing clearer career goals than did resident students (see Table 17).

Becoming acquainted with different fields of knowledge (CAR 4). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the means of the two groups ($t(889) = -3.525$, $p = .001$). The

mean of the commuter group was statistically higher ($M = 2.74$, $SD = .902$) than the mean of the resident group ($M = 2.47$, $SD = .938$). Commuter students perceived they significantly made more progress towards becoming acquainted with different fields of knowledge than did resident students (see Table 17).

Estimate of Gains: Arts and Communication

The resident students' and commuter students' data from the *CCSEQ* scores on the four items comprising the arts and communications area were compared to explore the students' perceived gains or progress they made towards arts and communication goals. A MANOVA was calculated examining the effect of residence (living on-campus or off-campus) on students' self-reported progress towards the arts and communication skills. A statistically significant effect was found ($\text{Lambda}(4,880) = 7.291$, $p = .001$) (see Table 16). Follow-up independent t tests for the individual items comparing the mean scores of the resident and commuter student groups found statistically significant differences between the groups (see Table 18). Although there were significant differences, the average rate of gains or progress made in arts and communication goals was only "some."

Developing an understanding and enjoyment of art, music, and theater (AC 5). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the means of the two groups ($t(895) = -.357$, $p = .001$). The mean of the resident group was statistically higher ($M = 2.09$, $SD = 1.058$) than the mean of the commuter group ($M = 1.79$, $SD = .933$). Resident students perceived they significantly made more progress towards developing an understanding and enjoyment of art, music, and theater than did commuter students (see Table 18).

Table 18 Estimate of Educational Gains in Arts and Communication

QUESTION	GROUP				<i>t</i> -Test Results		
	Resident		Commuter				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	df	<i>t</i>	<i>p</i>
Understanding Art, Music, Theater (AC 5)	2.09	1.058	1.79	.933	895	3.357	.001 *
Developing Understanding Of Literature (AC 6)	2.13	.997	1.95	.940	892	2.231	.027 *
Writing Clearly And Effectively (AC 7)	2.54	.910	2.61	.881	886	-.920	.358
Presenting Ideas Effectively In Speaking (AC 8)	2.34	.923	2.47	.888	894	-1.795	.073

* *p* < .05 indicates a significant statistical difference between groups.

Developing an understanding and enjoyment of literature (novels, stories, essays, poetry, etc.) (AC 6). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the means of the two groups ($t(892) = 2.231, p < .027$). The mean of the resident group was statistically higher ($M = 2.13, SD = .997$) than the mean of the commuter group ($M = 1.95, SD = .940$). Resident students perceived they significantly made more progress towards developing an understanding and enjoyment of literature (novels, stories, essays, poetry, etc.) than did commuter students (see Table 18).

Estimate of Gains: Personal & Social Development

The resident students' and commuter students' data from the *CCSEQ* scores on the five items comprising the personal and social development area were compared to explore the

students' perceived gains or progress they made towards personal and social development goals. A MANOVA was calculated to examine the effect of residence (living on-campus or off-campus) on students' self-reported progress towards personal and social development. A statistically significant effect was found ($\text{Lambda}(5,885) = 2.240, p = .048$) (see Table 16). Although this effect was found, follow-up independent t tests for the individual items found no statistically significant differences between the two groups (resident students and commuter students) (see Table 19). The means of the resident student group were not significantly different from the means of the commuter student group.

Table 19 Estimate of Educational Gains in Personal and Social Development

QUESTION	GROUP				<i>t</i> -Test Results		
	Resident		Commuter		df	<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Becoming Aware Of Different Philosophies, Etc (PSD 11)	2.49	1.003	2.34	.946	894	1.843	.066
Clarifying Own Values (PSD 12)	2.55	.951	2.58	.945	892	-.287	.774
Understanding Own Abilities And Interests (PSD 13)	2.81	.972	2.86	.899	894	-.691	.490
Understanding – Getting Along With Others (PSD 23)	2.54	.937	2.55	.939	894	-.147	.883
Developing Ability To Work With Others In New Setting (PSD 25)	2.62	.948	2.75	.934	895	-1.538	.124

Estimate of Gains: Perspectives of the World

The resident students' and commuter students' data from the *CCSEQ* scores of the four items comprising the career area were compared to explore the students' perceived gains or progress they have made towards developing and understanding perspectives of the world. A MANOVA was calculated to examine the effect of residence (living on-campus or off-campus) on students' self-reported progress towards developing and understanding perspectives of the world. A statistically significant effect was found ($\text{Lambda}(4,885) = 7.360, p = .001$) (see Table 16). Follow-up independent *t* tests for the individual items comparing the mean scores of the resident and commuter student groups found statistically significant differences between the groups (see Table 20). Although there were significant differences, the average rate of gains or progress towards perspectives of the world was only "some."

Table 20 Estimate of Educational Gains in Perspectives of the World

QUESTION	GROUP				<i>t</i> -Test Results		
	Resident		Commuter				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	df	<i>t</i>	<i>p</i>
Speaking Another Language (PW 18)	1.84	1.053	1.50	.822	891	3.930	.001 *
Interest In Political And Economic Events (PW 20)	2.10	1.012	1.85	.918	893	2.934	.004 *
Seeing Importance Of History (PW 21)	2.24	1.004	2.12	.945	893	1.510	.132
Learning About Other Parts Of World (PW 22)	2.19	1.005	1.83	.939	895	4.058	.001 *

* $p < .05$ indicates a significant statistical difference between groups.

Developing the ability to speak and understand another language (PW 18). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the means of the two groups ($t(891) = 3.930$, $p = .001$). The mean of the resident group was statistically higher ($M = 1.84$, $SD = 1.053$) than the mean of the commuter group ($M = 1.50$, $SD = .822$). Resident students perceived they significantly made more progress towards developing the ability to speak and understand another language than did commuter students (see Table 20).

Developing an interest in political and economic events (PW 20). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the means of the two groups ($t(893) = 2.934$, $p = .004$). The mean of the resident group was statistically higher ($M = 1.84$, $SD = 1.053$) than the mean of the commuter group ($M = 1.50$, $SD = .822$). Resident students perceived they significantly made more progress towards developing an interest in political and economic events than did commuter students (see Table 20).

Learning more about other parts of the world and other people (Asia, Africa, South America, etc.) (PW 22). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the means of the two groups ($t(895) = 4.058$, $p = .001$). The mean of the resident group was statistically higher ($M = 2.19$, $SD = 1.005$) than the mean of the commuter group ($M = 1.83$, $SD = .939$). Resident students perceived they significantly made more progress towards learning about other parts of the world and other people than did commuter students (see Table 20).

Developing good health habits (Additional Question #24). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the means of the two groups ($t(895) = 2.571, p = .010$). The mean of the resident group was statistically higher ($M = 2.56, SD = .989$) than the mean of the commuter group ($M = 2.35, SD = .976$) (see Table 21). Resident students perceived they significantly made more progress towards developing good health habits and physical fitness than did commuter students (see Table 21). The average rate of gains or progress made in good health habits was “quite a bit” for resident students and “some” for commuter students.

Table 21 Developing Good Health Habits

QUESTION	GROUP				<i>t</i> -Test Results		
	Resident		Commuter				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	df	<i>t</i>	<i>p</i>
Developing Good Health Habits	2.56	.989	2.35	.976	895	2.571	.010 *

* $p < .05$ indicates a significant statistical difference between groups.

Research Question 3: Is there a statistically significant difference between resident students (students who live in on-campus apartments) and commuter students (students who do not live in on-campus apartments) in terms of their reported levels of satisfaction with the college environment? The resident students’ and commuter students’ data from the *CCSEQ* scores on the “Student Satisfaction” Scale were compared to explore the levels of student

satisfaction about the nature of their environment. A MANOVA was calculated to examine the effect of residence (living on-campus or off-campus) on the “Student Satisfaction” scale. A statistically significant effect was found ($\text{Lambda}(5,869) = 11.408, p = .001$) (see Table 22). Follow-up independent t tests for the individual items comparing the mean scores of the resident and commuter student groups found statistically significant differences between the means of the two groups. The t test results for the student satisfaction items follow (see Tables 22 and 23).

Student Satisfaction

How many of the students you know are friendly and supportive of one another?

(ENV 2). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the means of the two groups ($t(873) = 3.919, p = .001$). The mean of the commuter group was statistically higher ($M = 2.93, SD = .591$) than the mean of the resident group ($M = 2.57, SD = .705$). Commuter students perceived that students were significantly more friendly and supportive of one another than did resident students (see Table 22). Although there were significant differences, the average rate of satisfaction was “most.”

How many of your instructors at this college do you feel are approachable, helpful, and supportive? (ENV 3). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the means of the two groups ($t(873) = -2.648, p = .009$). The mean of the commuter group was statistically higher ($M = 3.06, SD = .705$) than the mean of the resident group ($M = 2.88, SD = .832$). Commuter students perceived that instructors were significantly more approachable, helpful, and supportive than did resident students (see Table 22). Although there were significant differences, the average rate of satisfaction was “most.”

Table 22 College Environment: Satisfaction Scale

MANOVA	<i>F</i>		Hypothesis df	Error df	<i>P</i>		
OVERALL	11.408		5	869	.001 *		

QUESTION	GROUP				<i>t</i> -Test Results		
	Resident		Commuter				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	df	<i>t</i>	<i>P</i>
Students Are Friendly, Supportive (Env 2)	2.57	.750	2.93	.591	873	-3.919	.001 *
Instructors Are Approachable, Helpful (Env 3)	2.88	.832	3.06	.705	873	-2.648	.009 *
Counselors, Etc, Helpful, Considerate (Env 4)	2.63	.881	2.83	.858	873	-2.760	.006 *
Courses Are Challenging And Stimulating (Env 5)	2.63	.742	2.91	.719	873	-4.573	.001 *
College Is Stimulating And Exciting (Env 6)	2.22	.852	2.53	.748	873	-4.401	.001 *

* $p < .05$ indicates a significant statistical difference between groups.

How many of the college counselors, advisors, and department secretaries you have had contact with would you describe as helpful, considerate, knowledgeable? (ENV 4). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the means of the two groups ($t(873) = -2.760$,

$p = .006$). The mean of the commuter group was statistically higher ($M = 2.83$, $SD = .858$) than the mean of the resident group ($M = 2.63$, $SD = .881$). Commuter students perceived that college counselors, advisors, and department secretaries they have had contact with were significantly more helpful, considerate, and knowledgeable than did resident students (see Table 22).

Although there were significant differences, the average rate of satisfaction was “most.”

How many of your courses at this college would you describe as challenging, stimulating, and worthwhile? (ENV 5). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the means of the two groups ($t(873) = -4.573$, $p = .001$). The mean of the commuter group was statistically higher ($M = 2.91$, $SD = .719$) than the mean of the resident group ($M = 2.63$, $SD = .742$). Commuter students perceived that courses at this college were significantly more challenging, stimulating, and worthwhile than did resident students (see Table 22). Although there were significant differences, the average rate of satisfaction was “most.”

Do you feel that this college is a stimulating and often exciting place to be? (ENV 6). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the means of the two groups ($t(873) = -4.401$, $p = .001$). The mean of the commuter group was statistically higher ($M = 2.53$, $SD = .748$) than the mean of the resident group ($M = 2.22$, $SD = .852$). Commuter students perceived that this college was a significantly more stimulating and often exciting place to be than did resident students than did resident students (see Table 22). Although there were significant differences, the average rate of satisfaction was only “some of the time” for resident students and “most of the time” for commuter students.

Additional Satisfaction Questions

If you could start over again would you go to this college? (ENV 1). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the means of the two groups ($t(873) = -7.239, p = .001$). The mean of the commuter group was statistically higher ($M = 2.68, SD = .561$) than the mean of the resident group ($M = 2.24, SD = .759$) (see Table 23). Commuter students reported that if they started over again they would be significantly more likely to attend this college than did resident students (see Table 23). Although there were significant differences, the average rate of response to starting over at this college was only “maybe” for resident students and “yes” for commuter students.

Table 23 College Environment: Additional Questions

QUESTION	GROUP				<i>t</i> -Test Results		
	Resident		Commuter				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	df	<i>t</i>	<i>p</i>
Attend Same College (Env 1)	2.24	.759	2.68	.561	873	-7.239	.001 *
Places To Meet And Study On Campus (Env 7)	2.25	.669	2.37	.050	873	-2.369	.018 *
Places For Computer Access (Env 8)	2.53	.554	2.59	.518	873	-1.219	.224

* $p < .05$ indicates a significant statistical difference between groups.

Are there places on the campus for you to meet and study with other students?

(ENV 7). An independent t test comparing the mean scores of the resident and commuter student groups found a statistically significant difference between the means of the two groups ($t(873) = -2.369, p = .018$). The mean of the commuter group was statistically higher ($M = 2.37, SD = .050$) than the mean of the resident group ($M = 2.25, SD = .669$) (see Table 23). Commuter students reported significantly more places on the campus to meet and study with other students than did resident students (see Table 23). Although there were significant differences, the average rate of response to places to meet and study with other students was only “yes, a few places.”

CHAPTER FIVE

Summary, Discussion, and Recommendations

Introduction

This study can be characterized 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 community college. To evaluate whether resident and commuter students' educational goals and needs were being met, the institution acquired information about its students; its programs, services, activities, and environment; and the nature of students' interactions with the institution. Homestead Community College (HCC) needed to examine whether both groups of students benefited equitably from the institution's offerings. This study examined three aspects from the perspective of the student-as resident and student-as-commuter: (1) students' reported levels of involvement in a variety of activities related to the use of campus facilities and other opportunities to increase their academic and personal development; (2) students' reported levels of how much they have gained or progressed towards their educational goals; and (3) students' reported levels of satisfaction with the college environment. The *Community College Student Experiences Questionnaire (CCSEQ)* (Pace et al., 1999) was used in this study to measure the diverse characteristics, goals, external responsibilities, college environment, and desired outcomes of the community college students. Results from this study indicated that statistically significant differences between resident students and commuter students existed in all three aspects (involvement in college activities, estimate of gains or progress towards educational goals, and student satisfaction with the college environment) of this study. A discussion and summary of major findings for each research question will be presented.

The chapter will conclude with implications and recommendations for practice and further research studies.

Summary and Discussion

Research Question 1: Is there a statistically significant difference between resident students (students who live in on-campus apartments) and commuter students (students who do not live in on-campus apartments) in terms of their reported levels of involvement in college activities?

The MANOVA was used to compare the difference among means of totals for the eight areas of college activities comprising the Quality of Effort Scales for Homestead Community College resident students and commuter students. For the two groups (resident and commuter student), the analysis of data yielded statistically significant F values ($p < .05$). The t -test for independent means was used to compare the mean scores of the resident students and commuter students for the eight Quality of Effort areas. The follow-up t -tests found statistically significant differences ($p < .05$) between the means of the two groups. The statistical analysis found significant differences between the means of the two groups in the following college activities: Library, Faculty, Student Acquaintances, Art-Music-Theater, and Computer Technology. Again, the MANOVA was used to compare the difference among means of totals for the five additional areas of college activities. For the two groups, the analysis of data yielded statistically significant F values ($p < .05$) for the following college activities: Learning /Study Skills, Athletic Activities, Clubs/Organizations, and Counseling/Career Planning. When significant effects were found, the independent t -tests determined if there were differences in the individual items based on whether students reside on-campus or off-campus. The follow-up t -tests found statistically significant differences ($p < .05$) between the means of the two groups for items

within these areas. Where significant differences were found, the mean for the resident students' levels of involvement in college activities was higher than the mean for the commuter students.

For the two groups (resident and commuter student), the analysis showed different mean scores for five of the eight Quality of Effort scales and four of the five additional College Activities areas, resulting in a conclusion that resident students at Homestead Community College levels of involvement in these college activities were higher than commuter students. The researcher concluded there are significant differences between resident students and commuter students in the degree to which they take advantage of college activities and opportunities available to them. Student residence – living on-campus or off-campus – was related to reported levels of involvement in college activities. Resident students had higher levels of involvement than did commuter students. This is consistent with results obtained in similar studies (Astin, 1973, 1977; Balest, 2001; Chickering, 1974; Kuh, Kinzie, Schuh, Witt, & Associates, 2005; Pike, 1997).

Students living on-campus did have significantly higher levels of involvement than did commuter students. Resident students had significantly higher levels of involvement in activities outside of class. A potential reason why resident students reported higher levels of involvement is that these students have more time and more opportunity to get involved in many aspects of campus life than do commuter students. Resident students spend a substantial amount of time in their apartments. Therefore, they have greater opportunities for interaction with peers and involvement in out-of-class activities. This conclusion is consistent with other studies (Astin, 1973, 1977; Chickering, 1974; Pike, 1997).

The findings from this research study are consistent with other studies: students living in on-campus apartments reported higher levels of involvement in Art, Music, and Theater (Astin,

1977; Pike, 1997); in interactions with peers and faculty (Astin, 1977; Chickering, 1974; Kuh, Kinzie, Schuh, Witt, & Associates, 2005; Pike, 1997; Terenzini, Pascarella, & Bliming, 1999); in social activities, athletics, clubs and organizations (Astin, 1977; Pike, 1997). One explanation for the higher levels of involvement has been presented – students who live on-campus have more time and more opportunity to get involved in all aspects of campus life. Terenzini, Pascarella, and Bliming (1999) found that students living in resident halls have more time and opportunity to socialize with others of different groups, have discussions about racial and ethnic issues, and have discussions with other students and faculty outside of class. Resident students are more likely to possess characteristics that foster higher levels of involvement: full-time attendance; not working or working less than 10 hours per week; no family responsibilities; and spending more time on-campus outside of class. For commuter students who have multiple and often conflicting obligations beyond the college campus, they have little or no time or interest in the out-of-class activities. Commuter students are more likely to possess characteristics that foster lower levels of involvement: part-time attendance; full-time work or working more than 10 hours per week; older; family responsibilities; and spending less than 6 hours per week on-campus outside of class. These characteristics often make it difficult for commuter students to become involved in the community college experience.

The commuter student group in this study reported lower levels of involvement in social activities readily available to resident students such as Art, Music, and Theater activities, and Clubs/Organization activities. Spending less time on-campus obviously limits the amount of time and opportunities commuter students can participate in certain activities (such as membership in clubs and organizations, and informal social activities with peers and faculty). Although, it is typically difficult to entice commuter students to participate in social activities,

this lack of social involvement may not impede student academic progress. According to Haplin (1990), academic integration has a greater influence on student outcomes than social involvement and integration. The commuter group reported similar levels of involvement in academic activities compared to resident students in Course activities, Writing activities, and Science activities. Homestead resident students reported higher levels of involvement in academic activities compared to commuter students in Library activities and Computer Technology activities. Balest's (2001) study of the relationship of work and level of involvement among community college students found that the less the student worked, the more he or she participated in the areas of Library activities, Faculty activities, Student Acquaintances activities, and Computer Technology activities. Therefore, one potential reason for Homestead resident students' higher level of involvement in these areas is that they reported more often either working less hours or not working at all than did commuter students. Another possible reason is that the resident students spend more time on-campus outside of class. The resident student has more opportunity to use this resource and, also, may be perceived by these students as a location of social interaction and activity on this campus. The library also has a computer lab area. This, combined with the fact that almost every building on campus has a computer lab with assistant and with convenient hours, may be a potential reason for resident students' higher level of involvement in both activities, Library and Computer Technology.

Homestead resident students reported higher levels of involvement in Counseling and Career Planning activities than did commuter students. Balest's (2001) study of community college students found that the younger students (traditional age, 18-22) reported higher levels of involvement in Counseling and Career Planning, Library, Faculty, Student Acquaintances, and Art/Music/Theater activities. Therefore, traditional age students (18-22 years old) that comprise

82% of the resident group population are more likely to be involved in Counseling and Career Planning Activities than commuter students that comprise 48% of this population. Another potential reason is that the resident student has more time and opportunity to interact with the two resident counselors on staff in the student apartment complex. This resource is not available to commuter students. Also, resident students reported higher levels of involvement in the Learning and Study Skills activities than did commuter students. A potential reason for resident students reporting higher levels in both areas – Learning and Study Skills, and Counseling and Career Planning activities – is that a special orientation program, developed by Student Services, introduces the resident students to programs and services available to them at Homestead Community College.

Research Question 2: Is there a statistically significant difference between resident students (students who live in on-campus apartments) and commuter students (students who do not live in on-campus apartments) in terms of their perception of estimate of gains or progress towards educational goals? The MANOVA was used to compare the difference among means of totals for the overall Estimate of Gains Scale and six areas of comprising the Estimate of Gains Section for Homestead Community College resident students and commuter students. For the two groups, the analysis of data yielded statistically significant F values ($p < .05$). The statistical analysis found significant effects for the overall Estimate of Educational Gains section and for the following Estimate of Educational Gains areas: Career, Arts & Communications, Personal & Social Development, and Perspectives of the World. Where significant effects were found, the independent t -tests determined if there were differences in the individual items based on whether students reside on-campus or off-campus. The follow-up t -tests found statistically significant differences ($p < .05$) between the means of the two groups for items within these areas. Where

significant differences were found, the mean for the resident students' levels of gains or progress towards educational goals was higher for the Arts & Communications and Perspectives of the World areas than the mean for the commuter students. The mean for the commuter students' levels of gains or progress towards educational goals was higher for the Career area. For the Personal and Social Development area, although the MANOVA found a significant effect between the two groups, no statistically significant differences were found within individual survey items.

For the two groups (resident and commuter student), the analysis showed different mean scores for three of the six areas of the Estimate of Gains section. The analysis showed the commuter students' means for the area of the Estimate of Gains section – Career – were higher than the commuter students' means. A statistical analysis found that the four items for the Career area differed significantly between the two groups. Commuter students reported higher levels of perceived gains or made more progress towards educational goals for the following items: “acquiring knowledge and skills applicable to a specific job or type of work,” “gaining information about career opportunities,” “developing clearer career goals,” and “becoming acquainted with different fields of knowledge.” One potential reason for Homestead commuter students' higher levels of involvement in this area is that these students are more likely to be majors or specializing in a health professional field. Forty-one percent of commuter students were enrolled in a health program compared to twenty-four percent of resident students. The researcher concluded that this difference in percentage of students enrolled in health programs between commuter and resident students could have led to the significant differences found in the Career items. This conclusion is supported by earlier research by Astin (1977) and Polizzi and Ethington (1998), who concluded students majoring in health programs perceived

significantly higher levels of educational gains or progress towards career preparation, such as job-related skills and knowledge of work than other groups of vocational students. Polizzi and Ethington (1998) found that students enrolled in health programs were more likely to be women, to be older, to have accumulated more total credits, and to have spent more time studying each week than other groups of vocational students.

The analysis showed the resident students' means for two areas of the Estimate Gain section – Arts & Communication and Perspectives of the World – were higher than the commuter students' means. Resident students reported higher levels of perceived gains or made more progress towards educational goals for the following items: “developing an understanding and enjoyment for art, music, and theater;” “developing an understanding and enjoyment of literature;” “developing the ability to speak and understand another language;” “developing an interest in political and economic events;” and “learning more about other parts of the world and other people.” The researcher concluded that resident students at Homestead Community College reported higher levels of gains or progress towards educational goals in these areas. It may be concluded that resident students at Homestead Community College have more time and more opportunity to get involved in many aspects of campus life that lead to higher levels of involvement in Art, Music, and Theater activities and Student Acquaintance activities than did commuter students. The researcher concluded that these aspects are related to resident students' higher levels of self-reported gains or progress towards educational goals in both areas – Arts & Communication and Perspectives of the World. This conclusion is supported by earlier research by Pace (1979) and Pike (1997) who found that students living on-campus in student apartments reported higher levels of progress towards educational goals in these areas which may be attributed to higher levels of involvement in Arts/Music/Theater, interaction with peers and

faculty, and the increased intellectual content of interactions. Students living in resident halls have more time and opportunity to socialize with others of different groups, have discussions about racial and ethnic issues, and have discussions with other students and faculty outside of class is also supported by other researchers (Kuh, Kinzie, Schuh, Witt, & Associates, 2005). The students living in on-campus apartments also have more opportunity to interact with different race and ethnic backgrounds, and international students. Analyses of ethnicity data revealed that 32% of the resident students identified themselves as Black, African-American compared to 2% of the commuter students. Fifty-seven percent of the resident students indicated they were White compared to 95% of the commuter students. Fourteen percent of the resident students indicated that their native language is not English compared to 2% of the commuter students.

Research Question 3: Is there a statistically significant difference between resident students (students who live in on-campus apartments) and commuter students (students who do not live in on-campus apartments) in terms of their reported levels of satisfaction with the college environment? The MANOVA was used to compare the difference among means of totals for the five items comprising the Student Satisfaction Scale for Homestead Community College resident students and commuter students. For the two groups, the analysis of data yielded a statistically significant F value ($p < .05$). The t -test for independent means was used to compare the mean scores of the two groups for the five items comprising this area. The follow-up t -tests found statistically significant differences ($p < .05$) between the means of the two groups for all five Student Satisfaction items. Where significant differences were found, the mean for the commuter students' levels of satisfaction with the college environment was higher than the mean for the resident students. Again, the t -test was used to compare the difference among means of totals for the three additional items of the College Environment section. For the

two groups, the analysis of data yielded statistically significant t values ($p < .05$) for two of the three items. The independent t -tests determined there were differences in these individual items based on whether students reside on-campus or off-campus. Where significant differences were found, the mean for the commuter students' levels of satisfaction with the college environment was higher than the mean for the resident students.

For the two groups (resident and commuter student), the analysis showed different mean scores for all five items of the Student Satisfaction scale, resulting in a conclusion that commuter students at Homestead Community College are more satisfied with the college environment than resident students. Commuter students reported higher levels of satisfaction with the college for the following items: "students are friendly and supportive of one another;" "instructors are approachable, helpful, and supportive;" "college staff are helpful, considerate, and knowledgeable;" "courses are challenging, stimulating, and worthwhile;" and "this college is stimulating and often exciting place to be." This conclusion is not consistent with research (Astin, 1977). Astin concluded that students who live on campus had higher levels of student and faculty interaction than commuter students. Frequent interaction with faculty was more strongly related to satisfaction with college environment than any other type of involvement. He found that students who had many contacts with faculty were more likely to express satisfaction with all aspects of their institutional experience (including student friendships, the intellectual environment, and even the administration of the institution) than those students who interacted less frequently with faculty. This study found the opposite results – commuter students were more satisfied with their overall college environment. A potential reason is that there is a lack of minority role models for the minority and international students on-campus residents which comprise 43% of the resident population. The faculty and staff at Homestead are primarily white

or Caucasian. Another potential reason is that there was a change in management that occurred during the semester. In addition, new rules and regulations were implemented for the Spring 2004 semester. The researcher concluded that the resident students overall dissatisfaction with these changes occurring in the student housing complex may have influenced their overall perception of the college environment. In addition, many of the residents were from urban and suburban areas and perceived this rural area as not providing the cultural and social experiences they needed. This fact may have filtered down to their overall lower levels of satisfaction with the college environment.

Overall Summary

A finding in this study was the number of students who “never” or only “occasionally” participated in many of the College Activities subsection items. The means for both groups – resident students and commuter students – indicated a low level of involvement or participation in selected activities. The low mean values for activities with significant differences (Library, Faculty, Student Acquaintances, Art/Music/Theater, Computer Technology, Learning and Study Skills, Athletics, Clubs and Organizations, and Counseling and Career Planning), lead to the conclusion that, on the average, participation in these activities occurs infrequently for most community college students.

For the Estimate of Gains section, resident students and commuter students reported their estimated knowledge of gains or progress towards educational goals in the “some” range with one exception – Career. The low mean values for the estimate of gains with significant differences (Arts/Communications and Perspectives of the World), lead to the conclusion that, on the average, students perceive only moderate progress towards their educational goals in these areas. For the Career subsection items, resident students and commuter students reported their

estimated knowledge of gains or progress towards career educational goals in the “quite a bit” range. Mid-range mean values for this estimate of gains section indicate that students perceived they made progress towards their career goals.

For the Student Satisfaction section, the means for both groups – resident students and commuter students – indicated a higher level of satisfaction with the college environment (student, faculty, administration, courses, and college). The average for both groups – resident student and commuter students – indicated that, on the average, students were satisfied with the college environment “most” or “most of the time.”

Although these findings suggest there are differences between resident and commuter students, caution should be taken not to over generalize the results. Because the study was conducted at a single institution, determining whether similar findings at this institution or at other institutions would produce similar results is difficult. The results of this research study are limited to this institution and, possibly, other community colleges with resident populations. The results may also be limited to small, rural community colleges that attract residential students from nearby suburban and urban areas. In addition, the results of the current research captured the students’ perceptions at a given point in time. If this study had been taken at a different point in time, it is possible the findings identified would not have been the same.

This study using the *Community College Student Experiences Questionnaire* (CCSEQ) examined three aspects from the perspective of the student-as-resident and student-as-commuter: (1) students’ reported levels of involvement in a variety of activities related to the use of campus facilities and other opportunities to increase their academic and personal development; (2) students’ reported levels of how much they have gained or progressed towards their educational goals; and (3) students’ reported levels of satisfaction with the college environment. The

findings of this study may have important implications for future research and practice as discussed in the next section.

Recommendations for Future Research

The theory of student involvement centers on that fact that the most valuable institutional resource may be student time (Astin, 1977; Pace, 1982). Many students enrolled in community colleges lead very complicated and busy lives, thus limiting their involvement in college activities. Community colleges need to conduct studies to see how the experiences of resident students and commuter students are the same or different within two-year institutions. Although significant differences were found from this research, most of the differences found between resident students and commuter students at Homestead Community College were trivial as previous research suggests (Astin, 1973; Balest, 2001). Therefore, the following suggestions for future research at the community college level are recommended.

1. Additional research with community colleges' resident students and commuter students should be conducted to determine the similarities and differences in their experiences. Community colleges need to conduct similar comparison studies of these two groups of students to see how the experiences of the resident students and commuter students are the same or different within two-year institutions. As Jacoby (1989) suggested, to evaluate resident students' and commuter students' educational goals and needs to see if they were being met, the institution must acquire information about its students; its programs, services, and activities, and environment; and the nature of students' interactions with the institution. This is an on-going, continual process of assessment. The *CCSEQ* is one instrument that allows community college researchers to collect additional information and data about their

- students and could be used for this purpose. Therefore, a follow-up assessment using the *CCSEQ* is recommended.
2. Qualitative research should be conducted with students to determine why they never participated in the various college activities, as measured by the *CCSEQ*. For example in this study, students on average reported that they never participated in or attended on-campus or off-campus art, music, and theater events; and they never attended an art exhibit on-campus. Through focus groups or interviews with individuals, researchers could ask open-ended questions that might provide a more complete picture of why students do not participate even though these survey items are related to important general education goals that the college articulates for its students. The results from this added qualitative research could enable researchers to identify strategies for increasing student participation in these important activities.
 3. Researchers should engage in longitudinal studies that explore the relationship between student involvement and self-reported gains and satisfaction in the two-year college setting. Institutions need to examine whether both groups – resident students and commuter students – benefit equitably from the institutions’ opportunities and offerings. The major variable for this study was residence status – students who live on-campus and off-campus. Studies have not scrutinized the effect of residence on levels of involvement in activities among community college students. In addition, variables such as peer groups, age, sex, ethnic background, finances, employment, and family status may be related to differences between these groups (Jacoby, 1989). It would be valuable to see if students’ early engagement and levels of efforts result in gains at a later point in their college career.

4. With the information gained from both perspectives (resident students and commuter students), additional research could examine if there are correlations between students' self-reports of involvement in different activities and other important dimensions such as grades, attrition, and retention.
5. Additional research into the effect of cultural differences – urban/suburban vs. rural – have on the three research questions of this study could be explored. Many Homestead Community College resident students are from urban and suburban areas, whereas most commuter students are from rural areas. Are there differences in students' perceived levels of involvement, estimate of gains or progress towards educational goals, and satisfaction with the college environment based on these variables at other community colleges?
6. A study that compares career and technical program students' quality of effort may give institutions more information about student development and learning and their relationship to this factor. This study concluded that students enrolled in health programs may lead to higher levels of perceived progress towards career goals. It may be interesting to see if there are differences among students' perceptions who are enrolled in programs such as nursing, therapeutic massage, and auto technology, for example.

Recommendations for Practice

The results from this study provided comprehensive data about Homestead Community College's students and their experiences with the institution. This study provided crucial information to assess whether the institution's programs, services, facilities, activities, and resources addressed the needs of both resident students and commuter students equitably.

Many aspects of the college environment may affect the perspective of the student-as-resident and student-as-commuter: mission, image, publications; recruitment, admissions, articulation; financial aid; orientation and transition programs; curriculum and classroom instruction; experiential learning; learning communities; co-curricular activities and programs; services and facilities; and information and communication (Jacoby, 1989).

An increasing number of resident students will be entering community colleges and they will continue to represent an increased proportion of the total student population (Lords, 1999). For example, two additional student housing units, accommodating 96 additional students, are being planned at Homestead Community College. The institution has the responsibility to provide opportunities and activities (academic and social) that will improve involvement of both student groups (resident students and commuter students). The resident population may come to this college differing in many important ways from the commuter students this college has traditionally served. Therefore, this institution and other community colleges with resident populations must develop practices and programs designed to meet the needs of both resident students and commuter students. Specific suggestions for practices that may increase community college students' involvement, both in-class and out-of-class, are discussed below.

1. Based on findings, the researcher encourages this community college to compare its students levels of involvement, levels of gains or progress towards educational goals, and levels of satisfaction with the college environment to that of similar institutions. Additionally, using benchmarks (described next), institutions could compare their own performance across different dimensions and across time and identify areas in need of improvement. The *Community College Survey of Student Engagement (CCSSE)* (2004) includes five benchmarks of effective educational practice leading to student

learning that could be used in this comparison. The *CCSSE*'s five benchmarks denote areas that educational research has shown to be important in quality educational practice. The *CCSSE* benchmarks are:

- a. Active and Collaborative Learning. Students should be actively involved in their education, have opportunities to think about and apply what they learn in different settings, and collaborate with others to solve problems or master challenging content. Students learn more when they are actively involved in their education and have opportunities to think about and apply what they are learning in different settings.
 - b. Student Effort. Students' behaviors contribute significantly to their learning and the likelihood that they will attain their educational goals. Students should apply themselves in the learning process and engage in activities important to the learning process.
 - c. Academic Challenge. Challenging intellectual and creative work is central to student learning and collegiate quality.
 - d. Student-Faculty Interaction. In general, the more interaction students have with their teachers, the more likely they are to learn effectively and persist toward achievement of their educational goals.
 - e. Support for Student Learners. Students perform better and are more satisfied at colleges that are committed to their success and cultivate positive working and social relationships among different groups on campus.
2. The researcher encourages Freshman/New Student Orientation Programs to be designed for community college students. Freshman orientation programs are a

proven method to assist in raising students' level of involvement (Chaves, 2003).

Seminar topics should include the college experience (resident student and commuter student), academic skill development (learning and study skills such as memory, listening, writing, and reading), academic and career planning, and life management.

3. The researcher suggests the creation of a Learning Assistance Center that offers comprehensive academic and co-curricular activities. They would include: academic evaluation and diagnostic testing; programs to improve study skills; peer tutoring; contact with college faculty, administrators, and staff; ongoing staff development and certification; referral services; counseling; and advising (Maxwell, 1997).
4. The researcher recommends the formation of learning communities that could be designed for Homesteads' residential students and commuter students, as well as other subgroups such as English as a second language (ESL) students, nursing students, and transfer students. These learning communities should link students' in-class course work and out-of-class experiences to achieve a better understanding and integration of the course material. Learning community models could include freshman interests groups (FIGs), linked courses, learning clusters, and residential learning communities (Chaves, 2003). Learning communities for commuter students could connect these students to others with similar goals and interests, thus helping create a support network they can rely on as they move through their program of study (Kuh, Kinzie, Schuh, and Whitt, 2005). Learning communities can help inform commuter students about campus events, sponsor workshops, and other activities designed to promote academic success and to promote their involvement in campus

organizations. Residential learning communities can provide academic and social support that may be needed by the traditional aged student.

5. The researcher suggests finding ways to encourage more students to participate in cultural events which emphasize the arts, music, theater, and cultural diversity (such as multiculturalism and social justice). Students could be required (as part of a freshman/new student orientation class) to attend a minimum of 6 events during their first semester at Homestead Community College. In many cases, the activities could be linked to other courses and curriculum programs. They could be offered at different times such as day and evening, or during class times, to meet the variety of time schedules of community college students.

These recommendations for practice are characterized by quality interactions with other students, faculty, and administration. All of the recommendations for practice emphasize increasing student involvement. By becoming involved, both in-class and out-of-class, students develop support systems that they need to succeed in college (Kuh et al., 2005). Community college students need assistance in many areas, including understanding academic work and expectations; increasing basic developmental skills such as mathematics, reading, and English; and managing time schedules for academic work, employment, family, and other activities. Involvement occurs when students participate in activities that the institution provides. If community colleges are to involve their students effectively, these institutions must focus on developing the practices, programs, and activities their student population need.

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Dr. Donald Alexander
President
Allegany College of Maryland
12401 Willowbrook Road

December 20, 2002

Dear Dr. Alexander

As you know, I am working on my doctorate in higher education leadership at West Virginia University. My dissertation research involves examining the relationship between student involvement and student achievement, and comparing groups of students within the institution to see how the experiences of those groups are the same or different. I seek your permission to conduct the research at Allegany College of Maryland.

The research will involve administering the Community College Student Experience Questionnaire to all students enrolled at Allegany College of Maryland's Cumberland Campus. The student survey is designed to measure the quality of effort community college students invest in using the college resources provided for their learning and development, and to relate this to their estimate of progress toward educational goals. The CCSEQ also assesses student satisfaction with the college environment. The CCSEQ also provides space for 20 locally developed questions in which the college can either ask students about additional aspects of the college or use additional questions to identify subgroups of students.

For statistical data analysis, I may need to match the student's identification number to the grades and demographic information of these students. However, this identification number will only link these data, and no individual identifying information will be revealed. All data analysis will be performed and reported only in aggregate form. In my dissertation and in all future publications of the research findings, Allegany College of Maryland will be referred to by pseudonym only, unless you provide explicit permission for me to refer to the college by name.

The use of the CCSEQ provides a tool for measuring student interest, impressions, and satisfaction with the institution. The CCSEQ will provide the college useful information about the experiences the college provides to diverse students. After discussing this research instrument with Dr. Gene Hall, Dr. Barbara Roque, and Mona Clites, they believe that the results and data from this study will help this institution improve the

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Social and Cultural Foundations, Technology Education

quality of its service to our students. They support the use of the CCSEQ and suggested additional possible uses of the CCSEQ such as preparing for self-study and accreditation review, assessing institutional effectiveness, and evaluating general education, transfer, and career/technical programs.

Thank you for your consideration and support.

Sincerely,

Richard W. Layman

February 16, 2004

Richard W. Layman
Doctoral Candidate
West Virginia University
2 Beall Street
Frostburg, Maryland 21532

Dear Mr. Layman:

I hereby grant you permission to conduct your dissertation research at Allegany College of Maryland during the Spring Semester 2004, provided that you adhere to the research methods described in your proposal. You may survey students and access student data from institutional records as long as strict confidentiality of all information is maintained. You may not refer to the College by name unless I explicitly grant you that permission in writing at a later time.

I wish you the best in this endeavor and look forward to reviewing the research findings.

Sincerely,

A handwritten signature in dark ink, appearing to read "Terance Rephann", is written over a horizontal line.

Terance Rephann, Ph.D.
Director of Institutional Research

April/May 2004

Hello.

My name is Rick Layman, and I'm a doctoral student at West Virginia University. I'm here to ask your help with an important research project concerning student experiences. In conjunction with ACM's Office of Institutional Research (Consumer Needs Committee), the survey will result in my dissertation, as well as serve as Allegany College of Maryland's Student Experiences/Satisfaction Survey for the 1994 Academic Year. In addition, the President supports and has approved this questionnaire. The survey will provide valuable information about how community college students spend their time. The information obtained from you and other community college students will help this institution improve and provide programs, services, and activities to meet students' needs.

The survey asks questions about student participation in various college activities, student progress towards educational goals, and student satisfaction with the college environment. At first glance, you may think it will take a long time to fill out this questionnaire, but you can actually complete it in 20-30 minutes. Your answers on the questionnaire, as well as student identifiers, will be kept completely confidential and will be used for statistical reporting only. That means that your answers will be combined with those of many other students to see if we can draw conclusions about what activities are most helpful to students. Completing this survey will have no effect on your grade in this course or athletic status.

Please read the directions to each section carefully, and then read each question carefully and answer based upon your own personal experience. You do not have to answer every question. The questionnaire does not ask you to write your name on it. Please use a #2 soft black lead pencil and mark your answers clearly in the spaces provided.

Your participation is voluntary. Your willingness to participate is important and very much appreciated. Thank you for your time.

If you have any questions about this project, please feel free to visit me – Rick Layman – Humanities Building, Room H-13 or call (301) 784-5151.

**Department of Advanced Educational Studies
Educational Leadership Studies, Educational Psychology,
Social and Cultural Foundations, Technology Education**

Allen Hall
PO Box 6122
Morgantown, WV 26506-6122

Phone: 304-293-3049
Fax: 304-293-2279

Equal Opportunity/Affirmative Action Institution

COMMUNITY COLLEGE STUDENT EXPERIENCES QUESTIONNAIRE

The main purpose of asking you to complete this questionnaire is to learn more about how community college students spend their time. The information obtained from you and from other community college students from all over the country will help administrators and faculty members provide programs which will benefit student learning and development within the college experience.

At first glance, you may think it will take a long time to fill out this questionnaire, but you can actually complete it in 20 to 30 minutes. You will find when you have finished it, that your answers provide a kind of self-portrait of what you have been giving and getting in your college experience.

The ultimate benefit from this or any other survey depends on the thoughtful responses and willing participation of those who are asked to help. Your willingness to participate is important and very much appreciated.

We do not ask you to write your name on the questionnaire. On the last page there is space for a student identification number if it is requested by your college.

The responses will be read by an electronic scanning device. Please use a #2 soft black lead pencil and mark your answers clearly in the spaces provided. Erase cleanly any response you wish to change.

This questionnaire is available through:

CCSEQ
Dr. Patricia H. Murrell
Center for the Study of Higher Education
The University of Memphis
Memphis, TN 38152
Phone: (901) 678-2775
Fax: (901) 678-4291
email: ccseqlib@cc.memphis.edu

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Jack Friedlander and Penny W. Lehman

(revised March, 1999)

DIRECTIONS: Indicate your responses by filling in the appropriate space under each question.

BACKGROUND, WORK, FAMILY

COLLEGE PROGRAM

BWF 1 Age

- ☐ 18-19 or younger
- ☐ 20-22
- ☐ 23-27
- ☐ 28-39
- ☐ 40-55
- ☐ Over 55

BWF 2 Sex

- ☐ Male
- ☐ Female

BWF 3 What is your racial or ethnic identification?

- ☐ Native American
- ☐ Asian or Pacific Islander
- ☐ Black, African-American
- ☐ Hispanic, Latino
- ☐ White
- ☐ Other: What? _____

BWF 4 Is English your native language?

- ☐ Yes
- ☐ No

BWF 5 During the time college is in session, about how many hours a week do you usually spend working on a job for pay?

- ☐ none, I don't have a job
- ☐ 1-10 hours
- ☐ 11-20 hours
- ☐ 21-30 hours
- ☐ 31-40 hours
- ☐ more than 40 hours

BWF 6 If you have a job, how does it affect your college work?

- ☐ I don't have a job
- ☐ my job does not interfere with my school work
- ☐ my job takes some time from my school work
- ☐ my job takes a lot of time from my school work

BWF 7 If you have family responsibilities, how does this affect your college work?

- ☐ I don't have family responsibilities
- ☐ those responsibilities do not interfere with my school work
- ☐ those responsibilities take some time from my school work
- ☐ those responsibilities take a lot of time from my school work

BWF 8 Are you in a work-study program?

- ☐ Yes
- ☐ No

CP 1 How many credits are you taking THIS term?

- ☐ Less than 6
- ☐ 6 to 8
- ☐ 9 to 11
- ☐ 12 to 15
- ☐ More than 15

CP 2 Including the credits you are now taking, what is the total number of course credits you have taken at this college?

- ☐ 1-15 credits
- ☐ 16-30 credits
- ☐ 31-45 credits
- ☐ 46 or more credits

CP 3 When do the classes you are now taking meet?

- ☐ day only
- ☐ evening only
- ☐ some day and some evening

CP 4 Up to now, what have most of your grades been at this college?

- ☐ A
- ☐ A-, B+
- ☐ B
- ☐ B-, C+
- ☐ C, C-
- ☐ lower than C-
- ☐ No grades, this is my first term.

CP 5 About how many hours a week do you usually spend studying or preparing for your classes?

- ☐ 1 to 5 hours
- ☐ 6 to 10 hours
- ☐ 11 to 15 hours
- ☐ 16 to 20 hours
- ☐ more than 20 hours

CP 6 About how many hours a week do you usually spend on the college campus, not counting time attending class

- ☐ none
- ☐ 1 to 3 hours
- ☐ 4 to 6 hours
- ☐ 7 to 9 hours
- ☐ 10 to 12 hours
- ☐ more than 12 hours

CP 7 What is the most important reason you are attending THIS COLLEGE at this time? (Mark ONLY ONE answer

- ☐ To prepare for transfer to a four-year college or university
- ☐ To gain skills necessary to enter a new job or occupation
- ☐ To gain skills necessary to retrain, remain current, or advance in a current job or occupation.
- ☐ To satisfy a personal interest (cultural, social).
- ☐ To improve my English, reading, or math skills.

COLLEGE COURSES

If you are enrolled in a vocational program, which of the following categories best describes your occupational/technical program? (MARK ONE):

DIRECTIONS: Indicate whether you have taken (or are now taking) any courses in the following areas:

	None	One	More than one
CC 1 College Math (not remedial math)	☐	☐	☐
CC 2 Computer Literacy	☐	☐	☐
CC 3 English Class or classes (to prepare you to take a college level English composition course.)	☐	☐	☐
CC 4 English Composition (not remedial English)	☐	☐	☐
CC 5 Fine Arts (such as music, theater, dance)	☐	☐	☐
CC 6 Foreign Languages	☐	☐	☐
CC 7 Humanities (such as history, literature, philosophy, etc.)	☐	☐	☐
CC 8 Math class or classes (to prepare you to take a college level math course.)	☐	☐	☐
CC 9 Physical or Health Education	☐	☐	☐
CC 10 Sciences (such as astronomy, biology, physics, chemistry, geology, etc.)	☐	☐	☐
CC 11 Social Sciences (such as psychology, political science, sociology, economics, ethnic studies, etc.)	☐	☐	☐
CC 12 Speech, Communications	☐	☐	☐

PROG 1 ☐ I am not enrolled in an occupational/technical program.

PROG 2 ☐ Agriculture (such as agricultural business, management, mechanics, or production; animal science; horticulture; landscaping; conservation; etc.)

PROG 3 ☐ Business (such as accounting; bookkeeping; data processing; office supervision; personnel and training; secretarial programs; etc.)

PROG 4 ☐ Management and Distribution (such as real estate; fashion merchandising; small business management; financial services marketing; food marketing; marketing management; institutional management; etc.)

PROG 5 ☐ Health (such as dental services; diagnostic and treatment services; medical laboratory technologies; mental health and human services; nursing services; rehabilitation services; etc.)

PROG 6 ☐ Home Economics (such as interior design; clothing and textiles; food and nutrition; food production; child care; etc.)

PROG 7 ☐ Technical and Communications (such as computer programming; educational media technology; radio and television technology; architectural technology; civil technology; electrical and electronic technology; environmental control technology; industrial technology; engineering technology and robotics; etc.)

PROG 8 ☐ Trade and Industrial (such as cosmetology; law enforcement; construction trades; heating and air conditioning; industrial equipment maintenance; aircraft mechanics; auto body repair; automotive mechanics; architectural, civil, or mechanical drafting; commercial art; commercial photography; truck and bus driving; tool and dye making; welding; etc.)

PROG 9 ☐ Other occupational/technical programs not listed above.

DIRECTIONS: Answer each of the following questions.

	Yes	No
DEG 1 Are you working for an AA degree?	☐	☐
DEG 2 Are you working for an AS degree?	☐	☐
DEG 3 Are you working for a diploma?	☐	☐
DEG 4 Are you working for a certificate?	☐	☐
DEG 5 Do you plan to transfer to a four year college or university?	☐	☐
DEG 6 Are you currently enrolled in an occupational/vocational program?	☐	☐

LEARNING AND STUDY SKILLS

How much OUT-OF-CLASS instruction have you received at the college in each of the following learning and study skills areas?

	None	Some
LSS 1 Memory skills	☐	☐
LSS 2 Note taking skills	☐	☐
LSS 3 Listening skills	☐	☐
LSS 4 Speaking skills	☐	☐
LSS 5 Writing skills	☐	☐
LSS 6 Reading skills	☐	☐
LSS 7 Test taking skills	☐	☐
LSS 8 Time management skills	☐	☐
LSS 9 Problem solving skills	☐	☐

COLLEGE COURSES

If you are enrolled in a vocational program, which of the following categories best describes your occupational/technical program? (MARK ONE):

DIRECTIONS: Indicate whether you have taken (or are now taking) any courses in the following areas:

		None	One	More than one
CC 1	College Math (not remedial math)	☐	☐	☐
CC 2	Computer Literacy	☐	☐	☐
CC 3	English Class or classes (to prepare you to take a college level English composition course.)	☐	☐	☐
CC 4	English Composition (not remedial English)	☐	☐	☐
CC 5	Fine Arts (such as music, theater, dance)	☐	☐	☐
CC 6	Foreign Languages	☐	☐	☐
CC 7	Humanities (such as history, literature, philosophy, etc.)	☐	☐	☐
CC 8	Math class or classes (to prepare you to take a college level math course.)	☐	☐	☐
CC 9	Physical or Health Education	☐	☐	☐
CC 10	Sciences (such as astronomy, biology, physics, chemistry, geology, etc.)	☐	☐	☐
CC 11	Social Sciences (such as psychology, political science, sociology, economics, ethnic studies, etc.)	☐	☐	☐
CC 12	Speech, Communications	☐	☐	☐

- PROG 1 ☐ I am not enrolled in an occupational/technical program.
- PROG 2 ☐ Agriculture (such as agricultural business, management, mechanics, or production; animal science; horticulture; landscaping; conservation; etc.)
- PROG 3 ☐ Business (such as accounting; bookkeeping; data processing; office supervision; personnel and training; secretarial programs; etc.)
- PROG 4 ☐ Management and Distribution (such as real estate; fashion merchandising; small business management; financial services marketing; food marketing; marketing management; institutional management; etc.)
- PROG 5 ☐ Health (such as dental services; diagnostic and treatment services; medical laboratory technologies; mental health and human services; nursing services; rehabilitation services; etc.)
- PROG 6 ☐ Home Economics (such as interior design; clothing and textiles; food and nutrition; food production; child care; etc.)
- PROG 7 ☐ Technical and Communications (such as computer programming; educational media technology; radio and television technology; architectural technology; civil technology; electrical and electronic technology; environmental control technology; industrial technology; engineering technology and robotics; etc.)

DIRECTIONS: Answer each of the following questions.

		Yes	No
DEG 1	Are you working for an AA degree?	☐	☐
DEG 2	Are you working for an AS degree?	☐	☐
DEG 3	Are you working for a diploma?	☐	☐
DEG 4	Are you working for a certificate?	☐	☐
DEG 5	Do you plan to transfer to a four year college or university?	☐	☐
DEG 6	Are you currently enrolled in an occupational/vocational program?	☐	☐

- PROG 8 ☐ Trade and Industrial (such as cosmetology; law enforcement; construction trades; heating and air conditioning; industrial equipment maintenance; aircraft mechanics; auto body repair; automotive mechanics; architectural, civil, or mechanical drafting; commercial art; commercial photography; truck and bus driving; tool and dye making; welding; etc.)
- PROG 9 ☐ Other occupational/technical programs not listed above.

LEARNING AND STUDY SKILLS

How much OUT-OF-CLASS instruction have you received at the college in each of the following learning and study skills areas?

		None	Some
LSS 1	Memory skills	☐	☐
LSS 2	Note taking skills	☐	☐
LSS 3	Listening skills	☐	☐
LSS 4	Speaking skills	☐	☐
LSS 5	Writing skills	☐	☐
LSS 6	Reading skills	☐	☐
LSS 7	Test taking skills	☐	☐
LSS 8	Time management skills	☐	☐
LSS 9	Problem solving skills	☐	☐

COLLEGE ACTIVITIES

DIRECTIONS: In your experience at this college DURING THE CURRENT SCHOOL YEAR, about how often have you done each of the following? Indicate your responses by filling in one of the circles to the right of each activity.

COURSE ACTIVITIES		Never	Occasionally	Often	Very Often	FACULTY		Never	Occasionally	Often	Very Often
CLASS 1	Participated in class discussions.	☐	☐	☐	☐	FAC 1	Asked an instructor for information about grades, make-up work, assignments, etc.	☐	☐	☐	☐
CLASS 2	Worked on a paper or project which combined ideas from different sources of information.	☐	☐	☐	☐	FAC 2	Talked briefly with an instructor after class about course content.	☐	☐	☐	☐
CLASS 3	Summarized major points and information from readings or notes.	☐	☐	☐	☐	FAC 3	Made an appointment to meet with an instructor in his/her office.	☐	☐	☐	☐
CLASS 4	Tried to explain the material to another student.	☐	☐	☐	☐	FAC 4	Discussed ideas for a term paper or other class project with an instructor.	☐	☐	☐	☐
CLASS 5	Did additional readings on topics that were introduced and discussed in class.	☐	☐	☐	☐	FAC 5	Discussed your career and/or educational plans, interests, and ambitions with an instructor.	☐	☐	☐	☐
CLASS 6	Asked questions about points made in class discussions or readings.	☐	☐	☐	☐	FAC 6	Discussed comments an instructor made on a test or paper you wrote.	☐	☐	☐	☐
CLASS 7	Studied course materials with other students.	☐	☐	☐	☐	FAC 7	Talked informally with an instructor about current events, campus activities, or other common interests.	☐	☐	☐	☐
CLASS 8	Applied principles and concepts learned in class to understand other problems or situations.	☐	☐	☐	☐	FAC 8	Discussed your school performance, difficulties or personal problems with an instructor.	☐	☐	☐	☐
CLASS 9	Compared and contrasted different points of view presented in a course.	☐	☐	☐	☐	FAC 9	Used electronic mail (E-mail) to communicate with your instructor.	☐	☐	☐	☐
CLASS 10	Considered the accuracy and credibility of information from different sources.	☐	☐	☐	☐			☐	☐	☐	☐

LIBRARY ACTIVITIES		STUDENT ACQUAINTANCES	
LIB 1	Used the library as a quiet place to read or study material you brought with you.	ST ACQ 1	Had serious discussions with students who were much older or much younger than you.
LIB 2	Read newspapers, magazines, or journals located in the library or on-line.	ST ACQ 2	Had serious discussions with students whose ethnic or cultural background was different from yours.
LIB 3	Checked out books and other materials to read at home.	ST ACQ 3	Had serious discussions with students whose philosophy of life or personal values were very different from yours.
LIB 4	Used the card catalogue or computer to find materials the library had on a topic.	ST ACQ 4	Had serious discussions with students whose political opinions were very different from yours.
LIB 5	Prepared a bibliography or set of references for a term paper or report.	ST ACQ 5	Had serious discussions with students whose religious beliefs were very different from yours.
LIB 6	Asked the librarian for help in finding materials on some topic.	ST ACQ 6	Had serious discussions with students from a country different from yours.
LIB 7	Found some interesting material to read just by browsing in the stacks.		

DO NOT MARK IN THIS AREA

COLLEGE ACTIVITIES

DIRECTIONS: In your experience at this college DURING THE CURRENT SCHOOL YEAR, about how often have you done each of the following? Indicate your responses by filling in one of the circles to the right of each activity.

		Never	Occasionally	Often	Very Often			Never	Occasionally	Often	Very Often
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>ART, MUSIC, THEATRE ACTIVITIES</p> </div> <div style="width: 45%;"> <p>SCIENCE ACTIVITIES</p> </div> </div>											
AMT 1	Talked about art (painting, sculpture, architecture, artists, etc.) with other students at the college.					SCI 1	Memorized formulas, definitions, technical terms.				
AMT 2	Talked about music (classical, popular, musicians, etc.) with other students at the college.					SCI 2	Practiced to improve your skills in using laboratory equipment.				
AMT 3	Talked about theater (plays, musicals, dance, etc.) with other students at the college.					SCI 3	Showed a classmate how to use a piece of scientific equipment.				
AMT 4	Attended an art exhibit on the campus.					SCI 4	Attempted to explain an experimental procedure to a classmate.				
AMT 5	Attended a concert or other musical event at the college.					SCI 5	Tested your understanding of some scientific principle by seeing if you could explain it to another student.				
AMT 6	Attended a play, dance, concert, or other theater performance at the college.					SCI 6	Completed an experiment/project using scientific methods.				
AMT 7	Participated in an art exhibit, musical event, or theatre performance at the college.					SCI 7	Talked about social and ethical issues related to science and technology such as energy, pollution, chemicals, genetics, etc.				
AMT 8	Attended an OFF-CAMPUS art exhibit, musical event, or theatre performance <u>for course credit</u> .					SCI 8	Used information you learned in a science class to understand some aspect of the world around you.				
AMT 9	Participated in an OFF-CAMPUS art exhibit, musical event, or theatre performance <u>for course credit</u> .					SCI 9	Tried to explain to someone the scientific basis for environmental concerns about pollution, recycling, alternative forms of energy, etc.				
						SCI10	Did paid or volunteer work OFF-CAMPUS to help the environment after learning about environmental issues in class.				
						SCI 11	Applied information or skills you learned in a science class to work (either volunteer or paid) outside of class.				
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>WRITING ACTIVITIES</p> </div> <div style="width: 45%;"> <p>ATHLETIC ACTIVITIES</p> </div> </div>											
WRITE 1	Used a dictionary [or computer (word processor) spell-check/thesaurus] to look up the proper meaning, definition, and/or spelling of words.					ATH 1	Followed a regular exercise program on campus.				
WRITE 2	Prepared an outline to organize the sequence of ideas and points in a paper you were writing.					ATH 2	Sought athletic instruction.				
WRITE 3	Thought about grammar, sentence structure, paragraphs and word choice as you were writing.					ATH 3	Attended an athletic event on campus.				
WRITE 4	Wrote a rough draft of a paper or essay and revised it before handing it in.					ATH 4	Coached or assisted with youth athletic programs on campus.				
WRITE 5	Used a computer (word processor) to write or type a paper.					ATH 5	Coached or assisted with OFF-CAMPUS youth athletic programs <u>for course credit</u> .				
WRITE 6	Asked other people to read something you wrote to see if it was clear to them.					ATH 6	Participated in a sport on campus.				
WRITE 7	Spent at least 5 hours or more writing a paper.										
WRITE 8	Asked an instructor for advice and help to improve your writing or about a comment he/she made on a paper you wrote.										

DIRECTIONS: In your experience at this college DURING THE CURRENT SCHOOL YEAR, about how often have you done each of the following? Indicate your responses by filling in one of the circles to the right of each activity.

**CAREER/OCCUPATIONAL
SKILLS**

DIRECTIONS: If you are enrolled in a career/occupational program or a course in which you learn occupational skills, answer the following items.

- OCC 1 Read about how to perform a procedure (occupational task, vocational skill).
- OCC 2 Listened to an instructor explain how to do a procedure.
- OCC 3 Watched an instructor demonstrate how to do a procedure.
- OCC 4 Practiced a procedure while being monitored by an instructor or other student.
- OCC 5 Practiced a procedure without supervision.
- OCC 6 Identified that there was a problem and located information from an instructor or other resource about what to do.
- OCC 7 Diagnosed a problem and carried out the appropriate procedure without having to consult any resource.
- OCC 8 Applied occupational skills learned in class to a job situation outside of class.
- OCC 9 Participated in an internship, cooperative, practicum, etc. with a local business, facility, or organization for course credit.

COMPUTER TECHNOLOGY

- COMP 1 Used E-mail to communicate with an instructor or other students about a course.
- COMP 2 Used the World Wide WEB or INTERNET [or other computer network] to get information for a class project or paper.
- COMP 3 Used a computer tutorial to learn material for a course or remedial program.
- COMP 4 Used computers in a group (cooperative) learning situation in class.
- COMP 5 Used a computer for some type of database management.
- COMP 6 Used a computer to analyze data for a class project.
- COMP 7 Used a computer to create graphs or charts for a class paper or project.
- COMP 8 Wrote an application using existing software or programming languages.

Never
Occasionally
Often
Very Often

CLUBS AND ORGANIZATIONS

- ORG 1 Looked for notices about campus events and student organizations.
- ORG 2 Read or asked about a student club or organization.
- ORG 3 Attended a meeting of a student club or organization.
- ORG 4 Assumed a leadership role (held an office, headed a committee, etc.) in a student organization or club.
- ORG 5 Participated in a campus project or event sponsored by a student organization or club.
- ORG 6 Participated in a project or event OFF-CAMPUS which was sponsored by a student organization or club.
- ORG 7 Participated in a project or event OFF-CAMPUS which was not sponsored by a student organization or club.

Never
Occasionally
Often
Very Often

COUNSELING AND CAREER PLANNING

- CCP 1 Talked with a counselor/advisor about courses to take, requirements, educational plans.
- CCP 2 Discussed your vocational interests, abilities and ambitions with a counselor/advisor.
- CCP 3 Read information about a particular 4-year college or university that you were interested in attending.
- CCP 4 Read materials about career opportunities.
- CCP 5 Made an appointment with a counselor or an advisor to discuss your plans for transferring to a 4-year college or university.
- CCP 6 Identified courses needed to meet the general education requirements of a 4-year college or university you are interested in attending.
- CCP 7 Talked with a counselor/advisor about personal matters related to your college performance.
- CCP 8 Have taken interest inventories or surveys (e.g. Strong-Campbell Interest Inventory, Kuder Occupational Interest Survey, etc.) to help you direct your career goals.

ESTIMATE OF GAINS

DIRECTIONS: In thinking over your experiences in this college up to now, to what extent do you think you have gained or made progress in each of the following areas? (Please mark one response for each item.)

		Very Little	Some	Quite a bit	Very Much			Very Little	Some	Quite a bit	Very Much
	<i>I have gained or made progress in:</i>						<i>I have gained or made progress in:</i>				
CAR 1	Acquiring knowledge and skills applicable to a specific job or type of work.					MSI 14	Understanding mathematical concepts such as probabilities, proportions, etc.				
CAR 2	Gaining information about career opportunities.					MSI 15	Understanding the role of science and technology in society.				
CAR 3	Developing clearer career goals.					MSI 16	Putting ideas together to see relationships, similarities, and differences between ideas.				
CAR 4	Becoming acquainted with different fields of knowledge.					MSI 17	Developing the ability to learn on my own, pursue ideas, and find information I need.				
AC 5	Developing an understanding and enjoyment of art, music, and theater.					PW 18	Developing the ability to speak and understand another language.				
AC 6	Developing an understanding and enjoyment of literature (novels, stories, essays, poetry, etc.).					MSI 19	Interpreting information in graphs and charts I see in newspapers, textbooks, and on TV.				
AC 7	Writing clearly and effectively.					PW 20	Developing an interest in political and economic events.				
AC 8	Presenting ideas and information effectively in speaking to others.					PW 21	Seeing the importance of history for understanding the present as well as the past.				
COMP 9	Acquiring skills needed to use computers to access information from the library, the INTERNET, the World Wide WEB, or other computer networks.					PW 22	Learning more about other parts of the world and other people (Asia, Africa, South America, etc.).				
COMP 10	Acquiring skills needed to use computers to produce papers, reports, graphs, charts, tables, or data analysis.					PSD 23	Understanding other people and the ability to get along with different kinds of people.				
PSD 11	Becoming aware of different philosophies, cultures, and ways of life.					24	Developing good health habits and physical fitness.				
PSD 12	Becoming clearer about my own values and ethical standards.					PSD 25	Developing the ability to get along with others in different kinds of situations.				
PSD 13	Understanding myself-my abilities and interests.										

ENV 1 If you could start over again would you go to this college?

- ☐ yes
☐ maybe
☐ no

ENV 2 How many of the students you know are friendly and supportive of one another?

- ☐ all
☐ most
☐ some
☐ few or none

ENV 3 How many of your instructors at this college do you feel are approachable, helpful, and supportive?

- ☐ all
☐ most
☐ some
☐ few or none

ENV 4 How many of the college counselors, advisors, and department secretaries you have had contact with would you describe as helpful, considerate, knowledgeable?

- ☐ all
☐ most
☐ some
☐ few or none

ENV 5 How many of your courses at this college would you describe as challenging, stimulating, and worthwhile?

- ☐ all
☐ most
☐ some
☐ few or none

ENV 6 Do you feel that this college is a stimulating and often exciting place to be?

- ☐ all of the time
☐ most of the time
☐ some of the time
☐ rarely or never

ENV 7 Are there places on the campus for you to meet and study with other students?

- ☐ yes, ample places
☐ yes, a few places
☐ no

ENV 8 Are there places on the campus for you to use computers and technology?

- ☐ yes, ample places
☐ yes, a few places
☐ no

DIRECTIONS: If your college asks you to reply to additional questions, provide your answers in the space below.

	A	B	C	D
1.	☐	☐	☐	☐
2.	☐	☐	☐	☐
3.	☐	☐	☐	☐
4.	☐	☐	☐	☐
5.	☐	☐	☐	☐
6.	☐	☐	☐	☐
7.	☐	☐	☐	☐
8.	☐	☐	☐	☐
9.	☐	☐	☐	☐
10.	☐	☐	☐	☐
11.	☐	☐	☐	☐
12.	☐	☐	☐	☐
13.	☐	☐	☐	☐
14.	☐	☐	☐	☐
15.	☐	☐	☐	☐
16.	☐	☐	☐	☐
17.	☐	☐	☐	☐
18.	☐	☐	☐	☐
19.	☐	☐	☐	☐
20.	☐	☐	☐	☐

Student Identification Number									
0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9

THANK YOU FOR YOUR PARTICIPATION

SCANTRON FORM NO. F-13425-UOM WINFLIPS 2 4000 - 543 - 5 4 3

Application for Exemption

Approval from the IRB staff must be received prior to beginning the research described below. Please type all responses and submit this form with original signatures. All investigators must complete Ethics Training before an approval will be granted.

1. Title of study: Exploring Differences in Level of Involvement, Educational Outcomes, and Satisfaction of Resident Students and Commuter Students at a Rural Community College

2. Investigators (list all investigators, principal investigator first; attach additional sheets if necessary):

Name	Signature	Dept/College	Address	Tel No
Richard W. Layman		Advanced Educational Studies: Leadership/Human Resources and Education	2 Beall Street Frostburg, Maryland 21532	(301) 784-5151 (301) 689-8574 (240) 727-8574
Name or initials			Ethics Training ¹	HIPAA Training ²
Richard W. Layman	YES if training has been completed		Yes (2/18/04)	
	¹ Ethics training: http://www.wvu.edu/~rc/irb/ethi_tra.htm			
	² HIPAA info: http://www.wvu.edu/~rc/irb/index.htm			

3. Estimated period of human subject involvement: Starting date: April 2004 Ending date: November 2004

4. Reason for conducting research ☐ Professional ☒ Dissertation ☐ Thesis
☐ Class Assignment ☐ Other specify

5. Source of funding (if applicable) _____

6. Number of projected subjects 2000 Number of projected records or data files 2000

7. This research involves (check all that apply—see attached "Exempt Research" page):

- ☐ a Collection or study of existing data, documents, records or specimens, recorded without identifiers
- ☐ b Normal educational practices conducted in established or commonly accepted educational settings
- ☐ c Educational tests (cognitive, diagnostic, aptitude, achievement)
- ☐ d Observation of public behavior
- ☒ e Surveys, interviews or hand-outs for subjects over 18
 (use age ranges, not actual age, for demographic information):
☐ Mail ☐ Telephone ☒ Person-to-person
- ☐ f Any possibility of identifying a subject (discuss in cover letter)
- ☐ g The possibility that the subject's responses or conduct (if they became public) may place the subject at risk of criminal or civil liability or be damaging to the subject's financial standing or employability
- ☐ h Sensitive aspects of personal behavior (for example: illegal conduct, drug use, sexual behavior or use of alcohol)
- ☐ i Investigator's participation in activities being observed
- ☐ j Only surveys or interviews of elected or appointed public officials or candidates for public office
- ☐ k Audiotaping
- ☐ l Children under age 18 (see Chapter II of the Guidelines)
 Note: Interviews and surveys with children are *never* exempt.
- ☐ m Food tasting and evaluation
- ☐ n Research and demonstration projects
- ☐ o Access to protected health information (PHI) (See HIPAA requirements: <http://www.wvu.edu/~rc/irb/index.htm>)

8. Goal of research

The purpose of this research study is to investigate whether resident students' and commuter students' reported level of involvement in activities, achievement of educational goals, and satisfaction with the educational experience are the same or different at one community college.

9. Explanation of procedures involved in research

The research will be conducted using survey research designs. Participants will provide data by completing the Community College Student Experiences Questionnaire. Data will be analyzed through MANOVA's and *t*-tests to compare the mean scores of two different or independent groups. Responses from selected student survey items will be summarized across participants from both groups with frequency counts and mean item scores with standard deviations.

10. Explanation of known risks to human subjects

There are no known risks to human subjects.

11. Explanation of how records will be kept

All surveys will require the student's identification number so that the researcher can identify students by residence (commuter student or resident student). A list of resident students' identification numbers will allow the researcher to proceed with secondary survey techniques if required to increase survey completion rates for this group as stated in the prospectus. Data will be compiled using SPSS. All data that may contain student identification numbers will be kept in a locked file cabinet and will not be revealed to anyone.

A cover letter addressed to respondents must accompany any survey or questionnaire. The cover letter must be on *the investigator's WVU departmental letterhead* and must include the following:

- 1 a statement that the project is research being conducted in partial fulfillment of the requirements for a course, master's thesis, dissertation, etc.
- 2 purpose of study
- 3 a statement that subjects' responses will be kept anonymous or confidential (explain extent of confidentiality if subjects' names are requested)
- 4 if audiotaping, a statement that subject is being audiotaped (explain how tapes will be stored or disposed of during and after the study)
- 5 a statement that subjects do not have to answer every question
- 6 a statement that subject's class standing, grades, or job status (or status on an athletic team, if applicable) will not be affected by refusal to participate or by withdrawal from the study
- 7 a statement that participation is voluntary

Attachments:

- ☒ questionnaire/survey to be used
- ☐ telephone text (including introductory remarks as in a cover letter—see above)
- ☒ cover letter
- ☒ permission from external institution, on their letterhead (if applicable)

I have reviewed the above information and recommend this study for exemption.

Dean or Director

Department Chair

Faculty Advisor

Dean or Director

Department Chair

CCSEQ

Dr. Patricia H. Murrell
Director

Dr. Corinna A. Ethington
Research Coordinator

Dr. John Smart
Associate

Dr. John Wasileski
Associate

July 8, 2004

Mr. Richard W. Layman
Allegany College of Maryland
Willowbrook Road
Cumberland, MD 21502

Dear Rick:

We are pleased that you have selected the Community College Student Experiences Questionnaire for use in your dissertation study. Please feel free to include a copy of the CCSEQ instrument in your appendix section. Good luck in your defense.

Sincerely Yours,

Patricia H. Murrell
Director

Center for the Study of Higher Education
The University of Memphis
308 Browning Hall
Memphis, Tennessee 38152-3340

telephone: (901) 678-2775
fax: (901) 678-4291
e-mail: ccseqlib@memphis.edu
<http://www.memphis.edu/ccseq>

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