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The commuters' alma mater: Profiles of college student experiences at a commuter institution

Tisa Ann Mason

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**The commuters' alma mater: Profiles of college student
experiences at a commuter institution**

Mason, Tisa Ann, Ed.D.

The College of William and Mary, 1993

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THE COMMUTERS' ALMA MATER:
PROFILES OF COLLEGE STUDENT EXPERIENCES AT A COMMUTER
INSTITUTION

A Dissertation
Presented to
The Faculty of the School of Education
The College of William and Mary

In Partial Fulfillment
Of the Requirements for the Degree
Doctor of Education

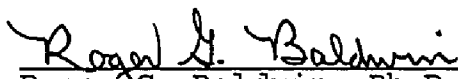
by
Tisa Ann Mason
June 1993

THE COMMUTERS' ALMA MATER:
PROFILES OF COLLEGE STUDENT EXPERIENCES AT A COMMUTER
INSTITUTION

by

Tisa Ann Mason


Approved June 1993 by



Roger G. Baldwin, Ph.D.
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Thomas J. Ward, Ph.D.

DEDICATION

"With pride and love that words cannot express; with hope for a wonderful life ahead; with honor and respect..." I dedicate this dissertation and degree to my parents Arlene and Doug Mayer and to my husband Bill Mason.

TABLE OF CONTENTS

DEDICATION iii

ACKNOWLEDGMENTS. vi

LIST OF TABLES viii

LIST OF FIGURES. x

ABSTRACT xi

CHAPTER 1 INTRODUCTION TO THE PROBLEM. 2

Statement of the Problem. 3

Background and Justification. 4

Research Questions. 12

Hypotheses. 13

Key Hypothesis 13

Subsidiary Hypotheses. 13

CHAPTER 2 REVIEW OF THE LITERATURE 15

Theoretical Framework:

Student Involvement Theory 15

Profiles of the Commuting Student . . . 26

Commuter Student Versus Resident Student. 37

CHAPTER 3 RESEARCH METHODS 40

Operational Definitions 41

The Quantitative Design 41

Instrumentation. 41

Population and Sample. 44

Data Gathering Methods 57

Restatement of the Research Questions and Hypotheses Pertaining to the Quantitative Data. 59

Data Analysis. 60

The Qualitative Design. 62

Population and Sample. 62

Data Gathering Methods 64

Restatement of the Research Questions and Hypotheses Pertaining to the Qualitative Design. 72

Data Analysis. 73

CHAPTER 4	QUANTITATIVE ANALYSIS OF RESULTS	75
	Description of the Sample.	75
	Findings	84
CHAPTER 5	QUALITATIVE ANALYSIS OF RESULTS.	167
	The Participants	167
	The High Involved Group	168
	The Low Involved Group.	172
	Qualitative Results.	174
CHAPTER 6	CONCLUSIONS.	292
	Summary of the Research problem and Method.	292
	Summary and Interpretation of Findings	297
	Limitations of the Study	352
	Implications	355
	Suggestions for Future Research.	367
APPENDICES		370
	Appendix A-1	370
	Appendix A-2	372
	Appendix A-3	373
	Appendix A-4	374
	Appendix A-5	375
BIBLIOGRAPHY AND REFERENCES.		377
VITA		382

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LIST OF TABLES

TABLE

1	Sample Frame54
2	Incoming Transfer Percentages of Christopher Newport University and Its Peer Institutions.	.56
3	Students Contacted to Constitute the Qualitative Sample for the High End of the Distribution. . . . .	.63
4	Students Contacted to Constitute the Qualitative Sample for the Low End of the Distribution. . . . .	.64
5	Student Participation in the Qualitative Segment . . . . .	.71
6	Age of Students. . . . .	.77
7	Age of Students. . . . .	.77
8	Gender of Students . . . . .	.78
9	Marital Status . . . . .	.78
10	Residence. . . . .	.78
11	Average College Grades . . . . .	.79
12	Major. . . . .	.80
13	Either Parent Graduated from College . . . . .	.80
14	Expect to Enroll for Advanced Degree . . . . .	.81
15	Enrollment Status. . . . .	.81
16	Time Spent on College and Related Activities . . . . .	.81
17	Time Spent Working . . . . .	.82
18	Expenses Provided by Family. . . . .	.82
19	Race or Ethnic Identification. . . . .	.83
20	Summary of Means and Standard Deviations on Quality of Effort Scales . . . . .	.90

21	Summary of T-Test Analyses for Quality of Effort . . . . .	.91
22	Summary of Means and Standard Deviations on the Satisfaction Index . . . . .	.92
23	Summary of Means and Standard Deviations on Environmental Ratings. . . . .	.93
24	Summary of T-Test Analyses for Environmental Ratings . . . . .	.94
25	Summary of Percent of Students Reporting Substantial Progress Toward Educational Goals . . . . .	.96
26	Pearson Correlation Coefficients of GPA and the College Student Experiences Questionnaire . . . . .	.99
27	Summary of Significant Findings.	165
28	Activities Engaged in During a two Week Period by Commuter Students Who Are Minimally Involved in the College Experience.	248 & 281
29	Contingency Table for Location of Activities and Whether or Not They are Considered to Be Educational for Commuter Students Who are Minimally Involved in the College Experience.	251
30	Number of High and Low Involved Students Utilizing Key Elements of Involvement When Describing and Defining College Student Experiences	285
31	Characterizations of Faculty Relationships as Described by High and Low Involved Students.	287

LIST OF FIGURES

FIGURES

1	Transfer Rates of Christopher Newport University and Its Peer Institutions . . . . .	.57
2	Distribution of Quality of Effort Scores. . . . .	.85
3	Cindy's Map	263
4	William's Map	264

THE COMMUTERS' ALMA MATER:
PROFILES OF COLLEGE STUDENT EXPERIENCES AT A COMMUTER
INSTITUTION
ABSTRACT

Writers have criticized the literature on college student involvement as being biased, starting from the premise that the residential experience is the normative one, and have called for a reexamination of the concept of student involvement. Thus in response to that need, this study explored the concept of student involvement from commuter college students' perspectives.

Focused on both Astin's theory of student involvement and Pace's work on quality of effort, it was hypothesized that there were differences between highly involved commuter college students and commuter college students who were minimally involved in the college experience. Since student involvement has both quantitative and qualitative features, the study explored the concept of student involvement by utilizing both research methods. The quantitative portion of the study applied the College Student Experiences Questionnaire. This instrument not only provided a snapshot of student involvement but also

identified highly involved and minimally involved college students who served as the sample frame for the qualitative portion of the study which involved the use of field notes, semi-structures interviews, focus groups, and paper and pencil exercises.

Through a combination of a series of statistical procedures, matrix displays, content analysis, and narration, it was concluded that highly involved commuter college students differed from those students minimally involved in the college experience. Students described a variety of opportunities for involvement and perceived that the opportunity for involvement did exist on a commuter campus.

Although students who were highly involved in the college experience were diverse with regard to age, gender and other characteristics, overall, those students who were enrolled full time and were younger than 26 tended to put forth more effort toward utilizing group facilities and participating in organized activities than did part-time students and students 26 years of age or older. Furthermore, evidence was presented to suggest that a key to involvement inequities among commuter students, and between commuter and resident students may involve the difficulty in engaging in constructive peer relationships. Based on the students' experiences 13 suggestions for

facilitating the involvement of commuter students were offered. Among other things it was concluded that where one lives (resident or commuter) may not be the sole determinant of one's college experience. Further research is needed with regard to this topic.

THE COMMUTERS' ALMA MATER:
PROFILES OF COLLEGE STUDENT EXPERIENCES AT A COMMUTER
INSTITUTION

CHAPTER 1

INTRODUCTION TO THE PROBLEM

From its earliest beginnings, American higher education has been concerned with more than the formal curriculum and the intellectual development of its students. For example, both Harvard College (founded 1636) and the College of William and Mary (founded 1692) viewed the moral development of their students as central to their mission (Rudolph, 1962). As early as 1770, students at Princeton formed two literary societies (Levine, 1988), which led to the founding of more student activities, comprising a myriad of out-of-class activities - academic clubs, fraternities, interest groups, publications, sports teams and so on.

Today, both formal (e.g. participation in a club) and informal (e.g. informal conversation of a professor and students over coffee) out-of-class activities constitute the co-curriculum - all the educational offerings of institutions of higher education that do not receive credit in the curriculum or are not required for

graduation (Miller and Jones, 1985). The involvement of college students in such out-of-class activities constituted the focus of this study.

Statement of the Problem

For college students, involvement in learning, or quality of effort, has been correlated with GPA, retention and personal growth (e.g. increases in self-esteem, leadership skills, self-direction, social relations). Yet it is more challenging for commuter students to be invested in the college experience, than it is for residential students. Further it has been estimated that approximately 80% of students in higher education are commuters (Laudeman and Osinske, 1986; Jacoby and Burnette, 1986).

This study was an exploratory attempt to provide a better understanding of the involvement of commuting college students. Writers have criticized the current literature on college student involvement as being biased, starting from the premise that the residential experience is the normative one, and have called for a reexamination of the concept of student involvement. Thus in response to that need, this study was designed to explore and describe the concept of student involvement from commuter college students' perspectives.

Background and Justification

My parents stubbornly opposed my going to Harvard, fearing that I would never come back; his parents have wanted Harvard for him since his birth. I arrived by train with coal dust in my nostrils, and two pressed-paper suitcases, after a sleepless, overnight trip from western New York State; he arrived from the western suburbs in a station wagon fully freighted with books, records, a hi-fi, pictures, plants, furniture, a rug, and a few clothes. (Where will it all fit?)

I carried ties, coats, and new white shirts; apparently he doesn't need them. I came from a large public high school whose teachers gave me an exaggerated sense of my intellectual powers; he comes from an elite private school whose teachers did him no such disservice. I was a starch-fed, occasional football player; he is a muscled, dedicated oarsman.

I wanted to write like Hemingway; he, a freshman mind you, scoffs at Hemingway as the eternal sophomore. My first night in my Winthrop House room was also my first night away from home, and I was often homesick; he has not been homesick since tennis camp in 1975. I had not driven a car at the time I entered Harvard; he drives like Mario Andretti. But neither of us smokes, and we both enjoy beer.

Is it all so different then? Are the lives of fathers and sons always to be so disjointed and dissimilar? Perhaps not.

For I suspect that he will experience the same mute and baffled astonishment I did at the diversity, at the sheer, exasperating abundance of talent on every side of him, and at the sensitive, rough friendliness of his classmates. He'll grumble at the food as I did; he'll struggle with writing papers as I did. He will, I hope, indulge in those late-night arguments, orgies of sleeplessness that are the hallmark for all informed and contentious Harvard freshman.

He will I hope, applaud with unashamed enthusiasm when he hears great lectures; listens to fine concerts, or watches a friend or roommate take on Chekov or Yale. He'll praise the Crimson and curse the Crimson, as we did 40 years ago.

Week by week, month by month, Harvard College will deepen him, sharpen him, disillusion him, toughen him, and yet somehow help him to define his own sense of self. Finally, I hope he will fall in

love often - with young women of course - but also with books, with bookstores, with ideas, with paintings, with music, with science and history, and literature, with learning as a way of life, and if all goes for him as it did for me, maybe even with Harvard itself. (Aloian, 1985, pp. 145-146)

This vivid excerpt, "Father and Son", captures the all encompassing spirit of college life and the learning process. Both much and little have changed throughout the history of higher education but one constant has been the nostalgia. The memories of alma mater focus on people and places and things, on friends and professors and events, but not necessarily on the classroom. Campus life and campus memories are much more than the classroom, the lectures and the assignments. For many it's a rite-of-passage; it's about becoming someone more than we were when we arrived and it's about what scholars have called student development - the impact of college on students emotionally, socially, morally, physically, as well as intellectually (Miller and Jones, 1985).

"The research is unequivocal: college students who are actively involved in both academic and out-of-class activities gain more from the college experience than those who are not so involved" (Kuh, Schuh, Whitt & Associates, 1991, p. xi). The importance of this research has been constantly reiterated over the past decade in publications such as College Experiences and Managerial Performance (AT&T, 1984), Student Development: Does

Participation Affect Growth? (Hood, 1984), "Student Involvement: A Developmental Theory for Higher Education" (Astin, 1984), Student Effort: A New Key to Assessing Quality (Pace, 1984), Involvement in Learning: Realizing the Potential of American Higher Education (The Study Group on the Conditions of Excellence in American Higher Education, 1984), Achieving Educational Excellence (Astin, 1985), "Orientation to College and Freshman-Year Persistence/Withdrawal Behavior in a Residential University: A Path Analytic Validation of Tinto's Model" (Pascarella, Terenzini, & Wolfle, 1986), College: The Undergraduate Experience in America (Boyer, 1987), "Commitment to College and Student Involvement" (Wilder & Kellams, 1987). These are but a few of the many publications regarding the importance of out-of-class life to the college experience.

Clearly, the overlying premise is that college students learn by becoming involved. Involvement is a measure of how much effort (physical and psychological) a student devotes to various activities encompassing the collegiate experience (Astin, 1984, 1985; Pace, 1980, 1986, 1988; Kuh, Schuh, Whitt & Associates, 1991). The more involved a college student is, the more that college student learns. Education is recognized as both a product and a process. College student development (i.e. acquiring

knowledge, improving self-esteem and a variety of skills, and modifying values and attitudes) requires an investment of time and effort by the student. Pace (1988) reminds us however, that despite the evidence of the importance of college student initiative, one should not conclude that what the college does is of minor influence. Pace believes that education requires a commitment from both the student and the institution. He states that there is an evident connection between college students' quality of effort and the quality of facilities and opportunities that make that effort worthwhile.

Several challenges are highlighted if student involvement theory is merged with the literature on commuting college students. First, the commuter student often has multiple life roles. This means that higher education for these college students competes with work, home and the community as center of social relationships. Counelis and Dolan (1974) found that family or work environments generally took precedence over the college environment for students who commute. Second, these multiple lifestyles tend to lead to divided lifestyles (Ward and Kurtz, 1969; Hardwick and Kazlo, 1973; Chickering 1974; Schuchman, 1974; Harrington, 1972). While work, study and play all occur within the same space for the residential student, this is not true for the

commuting student. The commuting student's personal schedule and environmental demands compete with college and make it more difficult to form friendships with other college students (Astin, 1977; Ward and Kurz, 1969; Chickering, 1974). Finally, it also follows that the commuter student has less time to spend on campus and therefore to commit to his or her college experience.

Unfortunately, many educators view the competing priorities of commuting college students as a lack of commitment to higher education, which is not necessarily the case (Andreas, 1983). If the research findings are true, however, it follows that commuter college students exert less time and effort in the various activities encompassing the collegiate experience. If they exert less effort are they therefore less "developed" and is the value of their degree lessened? Do commuter college students believe they receive less of an education and do they care? And if the institution is a partner in the educational process, then what are the resulting institutional implications? Build more residence halls as suggested by Astin in Four Critical Years? Are there other options for facilitating student involvement or are commuter campuses destined to be second class or even doomed to fail? Can a commuter campus be an involving college or is such an idea an oxymoron? What strategies

does a commuter institution utilize to address this situation?

The literature on college student involvement does not give much hope for the commuter campus. Astin (1977) emphatically states: "Results from this and other empirical studies (Chickering, 1974) suggest that, from an educational viewpoint, cessation of dormitory construction and expansion of places for commuters was a poor idea" (p.249). The authors of Involving Colleges: Successful Approaches to Fostering Student Learning and Development Outside the Classroom (1991), capture this continuing dismal portrayal of student involvement at commuter campuses: "When we began this project, some advised us not to study commuter universities since they have few students in residence, enroll many adult learners (older than the traditional age of eighteen to twenty-three), and do not have many of the features of traditional college life. We were told that life on commuter campuses simply was not rich enough to provide insights into student involvement" (p.107). The authors do a modest job of addressing the commuter campus dilemma but their suggestions still conflict with Astin's advice in that they recommend expansion of places for commuters.

Another window on this problem is provided by Boyer (1987). His 1980s study of the undergraduate experience in America revealed a deep division between commuting and residential college students. To illustrate this point, Boyer describes the following exchange: "The vice-president said he is "disturbed" by the image of the institution as a commuter college. `For me that conjures up images of someone coming to campus, using the services here, and then leaving'" (p. 211). Thus the image of the commuter institution appears to be distasteful and to clearly work against fostering campus involvement. Boyer reiterates this point by quoting an observer at yet another college: "Even more than race or class distinctions, commuter-resident distinctions are evident on this campus" (p.210). If this is true, how do college students at 100% commuter campuses differentiate themselves? Boyer goes on to reprint the following college student newspaper excerpt which contrasts commuter and resident students:

Commuters talk about their kids. Dorm students talk about how much beer they drank the night before. Commuters dress as if they were going to the office. A dorm student's wardrobe consists of bluejeans, sweatpants and T-shirts. Commuter students have trouble finding a parking space every morning. Dorm students have trouble finding matching socks. When class is over, dorm students attend club meetings, act as campus hosts and hostesses, make posters for special events, play intramural sports and pursue a variety of other activities. Commuters go home...
(p.210)

Thus, the research indicates that when one compares a residential student experience to a commuter experience, college students who live on campus are more likely to experience increases in aesthetic, cultural, and intellectual values; liberalization of social, political, and religious values and attitudes; increases in self-concept, intellectual orientation, autonomy, and independence; gains in tolerance, empathy, and ability to relate to others; stay in college and graduate (Pascarella and Terenzini, 1991). Where does this leave the commuter college student? Jacoby (1989) argues that research on commuter college students is limited in quantity and breadth and is often based on the premise that the residential experience is the normative college experience and therefore commuters' experiences are somehow less worthy. This study attempted to examine the involvement of the commuter student at a four year institution through a case study approach. It began with a quantitative measure of college student involvement intended to produce a general profile of a typical involvement pattern of a four year metropolitan commuter institution. It then proceeded with an ethnographic-like study, focusing on college students' perceptions about student involvement at a commuter institution.

Research Questions

- * What is the nature of college student involvement on a commuter campus?
 - What are the profiles of highly involved commuter college students? How do they compare to commuter college students who are minimally involved?
 - Do commuter college students exert less effort toward the college experience than resident college students?
 - Are commuter college students with certain characteristics and experiences more likely to participate in some activities and not others?
 - Are there institutional factors and conditions associated with college student involvement on a commuter campus?
 - What are commuter college students' perceptions regarding the opportunity for student involvement? If it is believed that opportunity is limited, is the limitation believed to be self-imposed or institutionally imposed (e.g. lack of facilities or programs)?
 - How are commuter students, who are minimally involved in the collegiate experience, utilizing their time? Are they involved in educationally related activities outside the campus? Do they feel

part of the campus community?

Hypotheses

Key Hypothesis

* There are differences between highly involved commuter college students and commuter college students who are minimally involved in the college experience. Understanding these differences will assist both college students and institutions in fostering student involvement among commuter college students.

Subsidiary Hypotheses

* A college student subculture epitomizing the collegiate way exists within a commuter campus.

* Both traditional (younger than 25 years of age) and nontraditional (25 years of age or older) college students are represented at both ends (high and low college student involvement) of the distribution.

* Full time college students are more frequently represented in the high involved group than the low involved group. The reverse is true for part time college students.

* There is a positive correlation between involvement and GPA.

* Students at the high end of the involvement distribution feel more satisfied with college.

* More women than men are represented at the high end of the involvement distribution.

* Time inventory sheets indicate that less involved students do have time available for involvement.

* Students at the low end of the continuum and younger than 25 years of age are less satisfied with college, whereas students older than 25 are more satisfied with college regardless of their involvement level.

* When asked to describe their college student experiences, highly involved students are more comprehensive and use a broader definition of involvement, while those students less involved utilize a more restrictive definition of involvement, have more restrictive relationships with professors, and are less aware of student services and involvement opportunities.

CHAPTER 2

REVIEW OF THE LITERATURE

The review of the literature presented in this chapter includes the following areas: the theoretical framework centering on student involvement theory, a historical sketch of the perceptions and the research focused on the commuter student, and a brief summary of the research comparing commuter and resident students.

Theoretical Framework: Student Involvement Theory

Dear Student Activities Director,

As I began college this fall, my advisor and the orientation staff constantly repeated, "Getinvolved." They said the more energy I put into my academic experience through active participation both in and out of the classroom, the more likely I was to be satisfied with what I learned here.

I've been looking around this fall, but I'm having trouble finding opportunities for involvement that meet my career goals. You see, for myself and a majority of other freshmen, the objective of a college education is to get a better job and make more money.

To meet that goal, I've decided to major in fields that can offer that. All areas of business, engineering and anything to do with computers interests me more than ever before. I don't see many advantages in taking courses outside my major, although my advisor says I must complete a group of courses known as "general education."

In looking through the options at the activities fair earlier this year, I was disappointed that the only organizations that seemed worthy of my time were those focused on my major. I talked with the Student Government and some students called "programers," but they were mostly interested in politics and

sponsoring activities, I couldn't see the benefit.

My time is at a premium with all the homework necessary for me to get good grades and compete for jobs and graduate school when I get my degree. If I'm to get involved outside the classroom, there's got to be a payoff.

Where is it?

Sincerely,
Kris College (Wells, 1986, p.50)

Certainly this letter does not portray the spirit or nostalgia for campus life described in the excerpt, "Father and Son", in the introduction. It does however, support Moffatt's (1989) observation that college students of the 1980s came to view student activities as a duty they felt might be good for them. Yet, this "duty attitude" appears to have emerged among college students about the same time college student affairs professionals were becoming student development specialists, emphasizing involvement and more frequently using the term co-curricular instead of extracurricular activities. Perhaps there is a relationship between the lexicon and practices utilized by student affairs professionals during the past two decades, and feelings among college students that involvement is a duty.

In support of this thought it is important to note that beginning in the 1970s significant progress was made in the discovery, creation and investigation of student development theory (Barr, 1988). Profoundly impacting the 1980s was Astin's student involvement theory and the subsequent "Involvement in Learning" report, both which

provided the student affairs profession with justification, rationale, benefits and processes for actively engaging college students to become involved (Wells, 1986). Student involvement was described by The Study Group (1984, p. 17) as follows: "Perhaps the most important (condition) for improving undergraduate education is student involvement... 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 and achievement, their satisfaction with their educational experiences, and their persistence in college, and the more likely they are to continue their learning" (Kuh, Schuh, Whitt & Associates, 1991).

Today, the most frequently quoted student development theory is Astin's involvement theory (Upcraft & Moore, 1990). It is based on his own research and is consistent with Pace's (1984) work on the quality of student effort. The premise of this theory is that college students learn by becoming involved. Student involvement, as defined by Astin, "is the amount of physical and psychological energy that the college student devotes to the academic experience" (1985, p. 36). The more involved the college student is, the more the student learns. "A highly involved student is one who, for example, devotes

considerable energy to studying, spends a lot of time on campus, participates actively in student organizations, and interacts frequently with faculty members and other students. Conversely, an uninvolved student may neglect studies, spend little time on campus, abstain from extracurricular activities, and have little contact with faculty members or other students" (Astin, 1985, p. 134). These examples illustrate two ends of the student involvement continuum. However, many possible forms and combinations of student involvement exist. A second element of student involvement is that of institutional resources. That is, the impact of the college experience depends upon the degree to which college students take advantage of the institution's resources (Astin, 1985; Kuh, Schuh, Whitt & Associates, 1991).

Astin's student involvement theory is comprised of five basic postulates:

1. Student involvement requires the investment of physical and psychological energy in some kind of activity, whether it is specific, such as organizing a swing-a-thon or preparing for a math exam, or more general, such as attending a football game or occasionally using the gym.

2. Student involvement occurs along a continuum - different college students will invest varying amounts of

energy in activities, and the same student will invest varying amounts of energy among a variety of activities at different times during the collegiate experience. For example, the editor of the college newspaper is significantly more involved than the student who may be satisfied to attend a basketball game. A student orientation leader may be very involved in the summer and at the start of classes and then become either less involved during the term or become involved in a different activity.

3. Student involvement has both qualitative and quantitative features. One could measure student involvement by counting the number of times a college student uses a particular student service such as the Career Center or computer lab or by identifying the number of clubs in which a student participates. Student involvement also has a qualitative dimension such as the level of pride a student feels toward his or her institution or how active or passive one's participation is in class.

4. The amount of learning or personal growth is directly proportional to the quality and quantity of effort expended. Thus, to provide an overview of the main points of a reading assignment to another college student requires more effort than merely highlighting a textbook. The greater the amount of intellectual effort used for

studying, the higher the grades (Pace, 1980). In general, "student quality of effort in scholarly/intellectual activities and informal interpersonal activities is positively related to reported gains in intellectual skills and personal/social development" (Ory and Braskamp, 1988, p.127).

5. Educational effectiveness of any policy or practice is related to the extent to which it encourages college students to take initiative and become actively engaged in appropriate activities (Astin, 1985; Kuh, Schuh, Whitt & Associates, 1991; Pascarella & Terenzini, 1991).

In a recent review of Astin's theory, Pascarella & Terenzini (1991) note that Astin now assigns more focus to the institutional environment as a critical role in student involvement, since variance in institutional environments affords college students differing opportunities for encounters with other ideas and people. The college student still plays the central role inasmuch as change is likely to occur to the extent the student becomes involved. That is, the college student must actively exploit the opportunities presented by the environment. Thus, learning or student development is not merely the consequence of a collegiate "impact" on a college student. Rather, the individual plays a central

role in determining the extent and nature of his or her development according to the quality of effort or student involvement with the resources provided by the college.

Interestingly, Astin developed his student involvement theory through a longitudinal study of college dropouts - the ultimate form of the uninvolved student. His goal was to identify factors in the college environment that significantly affected persistence. This study led to a subsequent longitudinal study, focusing specifically on the student involvement phenomena. His major findings included the following (1985, pp. 146-150):

1. College students who live on campus (versus commuters) show greater gains than students who commute in artistic interests, liberalism and interpersonal self-esteem. Residential students interact more frequently with faculty and participate more and achieve more in student organizations; are more likely to complete their education and to aspire to a graduate or professional degree.

2. College students in honors programs gain substantially in interpersonal self-esteem, intellectual self-esteem, and artistic interests. They are also more likely to aspire to graduate and professional degrees. Participation in an honors program enhances faculty college student relationships but may isolate college students from their peers.

3. College students who are heavily involved academically are less likely than are average college students to show an increase in liberalism, hedonism, artistic interests, and religious apostasy. High academic involvement is strongly related to satisfaction with all aspects of college except friendships with other college students.

4. Frequent interaction with faculty members is more strongly related to satisfaction with college than any other type of involvement or student or institutional characteristic.

5. Athletic involvement parallels academic involvement in that those college students who become heavily involved show smaller than average increases in political liberalism, religious apostasy, and artistic interests, but may be more satisfied with peer relationships.

6. Participation in student government is related to greater than average increases in political liberalism, hedonism, artistic interests and satisfaction with college student friendships.

Astin's student involvement theory contributes a solid foundation to the literature regarding out-of-class experiences. Wilson (1966) estimated that more than 70 percent of what a student learns in college can be

attributed to out-of-class experiences. "Out-of-class experiences include, but are not limited to, interactions with faculty after class - in the hallway, laboratory, library, residence hall, or union - as well as collaboration on research and teaching projects. Learning and personal development opportunities are also present in traditional settings, activities, and events, such as student residences, social organizations and clubs, recreational sports, off-campus work opportunities, internships, and public service" (Kuh, Schuh, Whitt & Associates, 1991, pp. 7-8). Since 70% of learning is estimated to occur outside the classroom, it is important to understand how that 70% interacts with college student involvement. According to Kuh, Schuh, Whitt & Associates (1991), a number of studies have indicated the following:

- * Students involved in out-of-class activities are more positive about their college experience, are more satisfied with their social life, living environment, academic major (Kegan, 1978), and contacts with faculty, and are more likely to graduate (Astin, 1977; Kapp, 1979; Pascarella, 1980) than students who are not involved.
- * Out-of-class activities provide opportunities for the development of leadership skills, such as teamwork, decision making, and planning (Schuh & Laverty, 1983), which are increasingly important for effective participation in community affairs (Gardner, 1990).
- * Men and women who hold leadership positions gain in self-esteem as well as in the development of leadership skills (Astin & Kent, 1983; Hanks & Eckland, 1976; Schuh & Laverty, 1983).
- * Participation in orientation activities positively influences both social integration and

institutional commitment and thus has indirect positive effects on satisfaction and persistence (Pascarella, Terenzini, and Wolfe, 1986).

- * One's initial commitment to college is associated with his or her degree of participation in high school activities and with the anticipated level of involvement in college activities (Wilder and Kellams, 1987).
- * The most important variable associated with gains during college in social concern or altruistic values is participation in leadership activities (Pascarella, Ethington, and Smart, 1988).

The underlying message is clear: College students learn by becoming involved. Involvement is the key. "The effectiveness of the undergraduate experience relates to the quality of campus life and is directly linked to the time students spend on campus and the quality of their involvement in activities" (Boyer, 1987, p. 180). Involvement. This important principle has been discussed, quoted and tested. Many studies have been conducted to gain an understanding on how college affects students and what exactly is the contribution of the out-of-class experience. Yet two things remain clear: research does not always significantly affect policy and practice, and the concept, principle, or theory of college student involvement is not yet fully understood.

As indicated earlier, Astin's student involvement theory is consistent with Pace's earlier work on the quality of student effort. The basic premise of Pace's work is that what a student gets out of college is

dependent to a large extent on the quality of effort the student puts into college. Like Astin, Pace's work is based on the recognition of education as both a product and a process; both theories emphasize process. Thus, the outcomes of college are a function of what the institution offers and what the student does with those offerings (Pascarella & Terenzini, 1991).

The significance of Pace's work lies in his development of an instrument to assess student involvement. Focusing on the importance of the investment of time and effort by the student, Pace created an instrument to measure quality of effort. The instrument consists of fourteen quality of effort scales that estimate a college student's use of an institution's facilities and opportunities. His research has indicated that quality of effort is the best predictor of college success, and more specifically, that the quality of effort students expend in the academic or intellectual aspects of the college experience have had statistically significant correlations of .39 with both general education and the academic outcome scales. Furthermore, students' quality of effort in personal and interpersonal experiences and group facilities and opportunities have had statistically significant positive correlations with the same two outcomes, ranging from $r=.19$ to $r=.4$ (Pascarella &

Terenzini, 1991). Since Pace's quality of effort scales were utilized in this study, more information regarding instrumentation can be found in the methodology section.

Profiles of the Commuter Student

"The commuting students, carrying briefcases, many wearing tortoise shell glasses with extra lenses of power, are coming up out of the subway, talking examinations. Unlike those who live in the dormitories, who are now ordering breakfast in the restaurants in the Square, they will be too early for nine o'clock classes... While they wait they put the time to advantage by rereading their notes." (Weller, 1933, p. 6).

This portrayal of commuter college students in the early 1900s does not at all reflect the stereotypical image of the commuter college student of the 1990s. Interestingly, commuter students of yesteryear were perceived as diligent college students, or in the words of Horowitz (1988) as "grinds", taunted by the insiders for raising academic standards. The image of today's commuter students, however, often evoke these thoughts: commuting students are less committed to their education, less able academically, and are not interested in the college beyond their classes (Rhatigan, 1986). But the commuting college students of both yesteryear and today share a strong bond when it comes to being cast as an outsider.

Even in the early 1900s Horowitz (1988) notes that the commuter students, albeit academically bright, went to

college intellectually, but psychologically and culturally remained at home. Horowitz (1988) further states that commuting was a major element which limited participation in campus life. In a 1991 publication, Pascarella and Terenzini also indicate that commuting college students by definition have limited opportunity for extracurricular involvement and social interaction with faculty and peers. For campuses with many commuting students, "the student body technically exists, but it lacks the network of coherent and influential student cultures often found on residential campuses (Gusfield, Kronus, & Mark, 1970). A major implication of this is that the commuter institution's social system may simply not be potent enough to play more than a relatively trivial role in the persistence or educational attainment process" (p.402).

Boyer's (1987) research indicates that student leaders and administrators are puzzled over ways to get commuter students involved. The student services literature, however, is full of ideas for reaching out to commuter students, and administrators and student leaders have been making attempts to include commuters in the life of the campus for many years. For example, Horowitz (1988) notes that James Bryant Conant, President of Harvard in the 1930s, "set aside space in Dudley Hall for commuters to eat their brown-bag lunches, gave them a house master,

the historian Charles Duhig, and thus created the beginnings of a real campus life at Harvard for outsiders" (p.182). The construction of college student unions in the early 1900s, viewed as the "campus living room", serves as another reminder of an attempt to accommodate commuters. The following excerpt from Great American Universities further illustrates this point:

Houston Hall is a big clubhouse, handsomely furnished but not embarrassingly elegant, designed by two architectural students, and intended for the use of the students as a whole. The remarkable thing about it is that it is so used. The Pennsylvanians, old and young, seem to take more pride in it than in anything else about the university. It is practically a unique institution. Most universities have nothing at all corresponding to it. The Harvard Union is its nearest counterpart, but at Harvard certain classes of students call the union "the poor man's club" and take pride in not being seen in it, while in Pennsylvania there is very little of that feeling. Here rich and poor, Greek and barbarian, Jew and Gentile, wise and unwise, bond and free, meet on terms as near to equality as could be expected under present conditions. (Slosson, 1910, p. 347).

If resources are available for involving commuter students, and attempts to include commuter students in the life of the college have been made, why then is commuter student involvement an issue?

Although attempts have been made to create a "real campus life" for commuter students, or to get commuter students involved, it is probably accurate to say that those attempts have not kept pace with the increasing

amount and diversity of commuter students attending institutions of higher education during the past fifty years. According to Stewart (1983) those attempts have been frustrated by the residential image of college life, the heterogeneity of commuter students, the lack of interest in these college students on the part of the institution, and a lack of research regarding the commuting experience. Thus to improve upon those attempts to enhance the college student involvement of commuter college students, or even to understand the issue of college student involvement and the commuter college student, requires first a thorough understanding, beyond that presented thus far, of the commuter college student constituency.

Commuter students represent approximately 80 percent of the undergraduate population in higher education (Rue & Stewart, 1983). About 60 percent of all college students live at home and commute: 41 percent of the students at private four-year colleges, 68 percent at public universities, and 76 percent at public two-year colleges (Pascarella and Terenzini, 1991). Clearly, commuter students are the majority of all college students, or as some have said, the silent or neglected majority.

The preferred definition of the commuter college student is any college student who does not live in institution-owned housing (Stewart and Rue, 1983). To further delineate this campus constituent, Rue and Stewart (1983) identified three variables that seem to be the most useful in describing college students. The first variable is that of dependence, living at home with a parent(s) or guardian, versus independence, living without the auspices of parental supervision (e.g. in an apartment or sorority house). The second variable is age; nontraditional, 25 or older, versus traditional. The final variable is full versus part time status.

The interaction between these three variables yields eight very different types of commuting college students (Rue & Stewart, 1983, pp. 5-6):

1. Dependent, traditional, full-time - e.g., a new freshman who lives at home because of financial constraints or because on-campus housing is limited.
2. Dependent, nontraditional, full-time - e.g., a recently divorced woman with children who has returned to her parents' home while in school.
3. Dependent, nontraditional, part-time - e.g., a veteran who lives at home and works.
4. Dependent, traditional, part-time - e.g., a 19-year old who lives at home and works.
5. Independent, traditional, full-time - e.g., an international student who attends school full-time supported by her government.

6. Independent, nontraditional, full-time - e.g., an older student who has returned to school on a full-time basis after retiring.
7. Independent, nontraditional, part-time - e.g., an adult student with a full-time job and family, who is enrolled in one course a semester for personal development.
8. Independent, traditional, part-time - e.g., a student living in her own apartment, who works to support herself and goes to school part-time.

Rue and Stewart's (1983) categorization of college students is helpful in making general distinctions among the many and diverse students so easily labeled commuter. This categorization was employed to describe the students upon whom this study focused. But in addition to demographic and descriptive characterizations, such as those delineated above, and important to any study of commuter college students, is an understanding of the biases that have shaped educator's perceptions of the commuter student constituency.

In the literature, the commuting college student has been characterized in a variety of ways. These characterizations, however, have not always been consistent. In examining the literature on the commuting college student, Jacoby (1989) distinguished what she called five waves of literature. These five waves illustrate the prevalent attitudes, characteristics and themes regarding commuter students.

The first wave is described as narrow in scope and negative in image. It is narrow in scope in that most of the studies focused on "a traditional-age, full-time, often single-sex population at a particular time at one institution. Researchers relied primarily on descriptive or survey data and self-reports. The research was usually based on small samples, often with low rates of response" (p.17). To make matters worse researchers claiming to "study the same problem frequently did not examine the same variables, employ the same methods, or select comparable samples" (p.17).

By the 1960s the theme of the college experience, or lack thereof, had emerged to convey a distinct negative image of the commuter experience. For example, Riesman and Jencks (1962) used the word supermarket in their research to describe the commuter institution. In latter day terms this image translates to the "7-11" analogy where college students run into the "convenience store" to get their "big gulp" of education and hurry on their way to involve themselves in everyday life. To further exemplify this problem, Jacoby (1989) utilizes the following excerpt to highlight the many derogatory words selected to describe the urban commuter institution:

The nature of the student body influences the character of many urban universities. 'Street-car college,' 'subway university,' and 'blue-shirt institution' convey a not always accurate description of institutions located in big cities. The commuting student who is 'half in and half out, half at college and half at home' is common among undergraduates (Klotsche, 1966, p.17).

Researchers, or publishing practitioners, such as Schuchman (1966), compounded and perpetuated this emerging stereotype by basing research on the assumption that by not living on campus a college student has been robbed of a rite-of-passage, and is therefore deprived of the opportunity to develop independence. Furthermore, this absence of a rite-of-passage frustrates the college student and propels him into crisis. Schuchman (1966) further observed that this chain of events resulted in commuter students having difficulty in developing a sense of identity. These problems, in Schuchman's opinion, were magnified for college students from working-class families. He concludes his article by stating: "the commuter college student each morning launches forth into another world to deal with its problems for several hours, and then returns to the old world each evening. The dangers of maladaptation and alienation from one or both worlds are very real" (p. 110).

The situation for commuter college students was made worse because research such as Schuchman's was frequently

cited in other articles as authoritative sources of information. This was further compounded by Harrington who in 1972 published the first review of the literature on commuter students. Harrington's review constituted a negative portrayal that over generalized the findings of limited studies of commuter students and condensed them to highlight only those findings which placed commuter students in an unfavorable light when compared to resident students (Jacoby, 1989).

Hope emerged with the second wave of research, instigated by Chickering (1974) and Astin (1975, 1977). Their research was both broader in scope and more valid. Although both authors clearly conclude that the residential experience is developmentally the preferred experience, and both upheld the notion that the residential experience is the normative one, their biggest contribution to commuter college students was perhaps that their research stimulated a heightened interest in the commuter student experience. Evidence of this heightened interest includes the establishment of the National Clearinghouse for Commuter Programs (1972), the first published monograph regarding commuting college students (1977), and the inception of a permanent commission on commuter programs by the American College Personnel Association (1978) (Jacoby, 1989).

Research during this second wave era focused on developing a more accurate and inclusive definition of the commuter college student (Foster, Sedlacek, & Hardwick, 1978; Sedlacek, Brooks, Miyares, & Hardwick, 1976; Slade & Jarmul, 1975). Researchers challenged Chickering's findings concerning the harmful effects of commuting (Davis & Caldwell, 1977; Mussano, 1976; Pugh & Chamberlain, 1976) and began to study why the residential experience was purported to provide so many benefits (Lacy, 1978; Pantages & Creedon, 1978; Welty, 1976) (Jacoby, 1989).

During the late 1970s and throughout the 1980s a considerable amount of writing occurred regarding the diversity of college students. The term nontraditional student became commonplace and yielded a better understanding, at least conceptually, of the diverse nature of the many students who populated our campuses (Jacoby, 1989). This focus on the diversity of college students characterized the third wave of commuter student research.

The fourth wave embraced a challenge to the academic community. Since, demographically speaking, the residential experience was no longer the norm, commuter

student advocates argued that it was imperative for administrators and faculty to develop a new frame of reference. A commuter perspective was necessary and should be utilized to reframe the image of the college experience and to develop new programs and services accordingly (Jacoby, 1989). In this vein the following occurred: Jossey-Bass published a New Directions for Student Services sourcebook entitled Commuter Students: Enhancing Their Educational Experiences (Stewart, 1983); the Council for the Advancement of Standards for Student Services/Development Programs published a standards manual in 1986 which included a section on programs and services for commuter students; and a special issue of the NASPA Journal was devoted entirely to commuter college students and commuter services (1986).

Finally, the fifth wave focused on the education reform reports since 1983. For example, The Study Group on the Conditions of Excellence in American Higher Education (1984), and College: The Undergraduate Experience in America (1987), both addressed concerns for the commuter college student. Although it is clear from these reports that the issue of student involvement for the commuter college student has not yet been resolved, and that there is still a tendency to view the student involvement issue from a residential frame of reference, reports such as

these are helpful in keeping the issue of the commuter college student and student involvement alive in the higher education community.

In essence, the commuter student has spent a historical lifetime cast in the role of outsider. Although attempts have been made to accommodate these college students, until relatively recently, they have remained the neglected majority. Yet given the current state of knowledge and biases about commuter students among the higher education community, it is perhaps still questionable as to whether or not they will alter their destiny. Are commuter students destined to be second class? Can a commuter campus be an involving college? Or is the idea of a commuter campus as an involving college limited only by the definitional constraints created by traditional notions of student involvement?

Commuter Student Versus the Resident Student

...I enrolled, in September, as a pre-law student, at the unprestigious little downtown branch of the state university, Newark College of Rutgers. I had wanted desperately to go away to college, if only to the Rutgers main campus... My dream of away remained fervent... I didn't care where 'away' was - one college would do as well as another.
(Roth, 1987, p.42)

"Joe College", the student speaking in this excerpt, considered himself fortunate when eventually his dream came true and he transferred to Bucknell. But not

everyone's dream comes true, and reflecting on the diversity of the commuting college student population, it's probably fair to assume that not everyone shares Joe College's dream. If not all commuting students share Joe College's dream, then what is at the root of all this research and debate over commuting versus residing? Simply stated: inequalities in educational outcomes. In other words, the core of the debate has to do with what an individual or institution views as the goal of higher education.

It is not the intention of this writer to review or debate the various conceptions of higher education. However, for the purpose of this study, it is important to note that the question of equality in educational outcomes is rooted in the belief that a college education should effect change in a variety of interpersonal and psychosocial areas, as well as in cognitive and intellectual competence. Given this assumption, the evidence consistently indicates that it is more challenging to affect change at a commuter institution than at a residential institution. "Residential institutions, compared with commuter schools, are more likely to provide their students with the kinds of interpersonal academic and social experiences associated with change in a wide variety of attitudinal and

psychosocial areas, including increases in cultural and esthetic attitudes and values; in social, political, and religious tolerance; in self-understanding and personal independence; and in persistence and degree attainment" (Pascarella & Terenzini, 1991, p. 639).

Pascarella and Terenzini (1991) caution however, that residential effects may really be indirect. Perhaps residential effects are interposed through the interpersonal experiences college students have with peers and faculty that are shaped by a residential setting. This sentiment is certainly consistent with Pace's (1988) observation that student development depends partly on what the student does, not merely where one lives. After accounting for all elements of selective distribution (e.g. socioeconomic status of students, the influence of cultural and social stratification on SAT and ACT scores, variance of costs of higher education and students ability to pay), once a student decides upon a particular college, the most important factor in the attainment of educational goals is not who one is, where one is, or where one lives, but what one does. Thus this study was intended to investigate the commuting college student experience; now that students are enrolled at a commuter institution, what are they doing?

CHAPTER 3

RESEARCH METHODS

Consistently the literature has indicated a need for further insight into the concept of college student involvement and the commuter student. It has suggested that perhaps a nontraditional research approach is needed to understand this nontraditional population. This study was an exploratory attempt to provide a better understanding of the college experience of commuter students. Since student involvement has both quantitative and qualitative features, this study explored the concept of student involvement, from the college student's perspective, by utilizing both research methods. The quantitative methodology was intended to provide insight into the phenomenon of college student involvement, or more specifically quality of effort, at a four year non-residential state supported metropolitan institution of higher education. It further identified the subjects for the qualitative study. That is, the instrument used in the quantitative segment not only provided a snapshot of student involvement but also identified highly involved and minimally involved college students. Those college students were then asked to participate in an

ethnographic-like study of their life as a commuter college student.

Operational Definitions

Involvement - the amount of physical and psychological energy that the college student devotes to the college experience (Astin, 1985, p.134); college student involvement can be found in what college students do and how much effort they expend in various activities (Kuh, Schuh, Whitt & Associates, 1991, p. 367).

Quality of Effort - a measure of how often, during the current school year, college students engage in various activities related to the use of campus facilities and opportunities intended for their learning and development (Pace, 1987, p.13).

The Quantitative Design

Instrumentation

The purpose of the College Student Experiences Questionnaire (CSEQ) is to measure the concept of quality of effort. The content of the quality of effort measures "focus on how students use their major resources and opportunities for learning and personal growth that are provided by the college for that purpose" (Pace, 1988, p.10). The instrument solicits information in three areas: student effort (involvement), student perceptions of the

campus environment, and an estimate of how much students believe they have learned or gained in certain areas (Arnold, Kuh, Vesper & Schuch, 1992).

The CSEQ Quality of Effort scales reflect student involvement by measuring the amount, scope, and quality of effort that students put into using college facilities (classroom/courses, library, science facilities, cultural facilities, athletic and recreational facilities, student union and residence facilities) in ways that capitalize on the potential of these facilities for learning and development; and the amount, scope, and quality of effort that students put into opportunities for personal/interpersonal experiences and group associations that the student has taken advantage of (contacts with faculty, clubs and organizations, experiences in writing, personal experiences related to self understanding, breadth and depth of college student acquaintances, topics of conversation among students, and information level of student conversations) in ways that promote personal and social growth. Each facility and each contact identified above, constitute 14 scales made up of multiple items. Each item has a four-point rating scale: 4=very often, 3=often, 2=occasionally, 1=never (Pace, 1987).

The CSEQ College Environment Scales measure student perceptions of their campus environments. That is, the questionnaire characterizes the college environment, with respect to the emphasis upon: (1) academic, scholarly, and intellectual qualities; (2) esthetic, expressive, and creative qualities; (3) being critical, evaluative, and analytical; (4) the development of vocational and occupational competence; and (5) the personal relevance and practical values of the courses, as well as the supportiveness of personal relationships; (6) among college students; (7) between students and faculty; and (8) with administrative personnel and offices. All eight scales employ seven-point rating scales (from 7=strong emphasis/support to 1=weak emphasis/support) (Pace, 1987).

Furthermore, the 21 Estimate of Gains scales from the CSEQ consist of student ratings of progress/gains toward objectives of college education related to intellectual skills (analysis and logic, synthesis, process of inquiry, quantitative thinking), science and technology (nature of science and experimentation, new scientific and technological developments, awareness of consequences of new technologies), general education, literature, and arts (knowledge of different fields, acquaintance with literature, understanding and enjoyment of art, music, drama, effective writing, awareness of different

philosophies and cultures), personal and social development (self-understanding, understanding others, developing values and ethical standards, ability to function as a team member, health habits and physical fitness) and vocational preparation (specific job training, broad career relevance, preparation for advanced study or professional work). Like the Quality of Effort scales, the Estimate of Gains scales are scored on a four-point rating scale: 4=very much, 3=quite a bit, 2=some, 1=very little (Pace, 1987).

Finally, the CSEQ provides an index of students' satisfaction with college, as well as an indication of how much reading and writing students have done. It includes demographic information (age, sex, marital status, parents' education, race or ethnic identification, and citizenship) as well as student status (year, transfer, residence, grades, major field, plans for further education, full or part time enrollment, time spent on school work, time spent on a job, parents' contribution to college expenses) (Pace, 1987).

Population and Sample

The population studied consisted of commuting students at metropolitan institutions of higher education in the United States. The sample frame was college

students at Christopher Newport University; a four year non-residential state supported metropolitan institution with an enrollment of approximately 5000 students. Since seniors are often more focused on bringing closure to their collegiate experiences as they prepare to leave the institution, and freshmen may still be immersed in an acculturation stage, sophomores and juniors were selected for study. Likewise, since transfer students may not be fully acculturated at Christopher Newport University, and typically bring with them a set of issues associated with why they transferred, transfer students were eliminated from the subject pool. Furthermore, since the CSEQ instructs students to respond to most questions based on the students' experiences during the current school year only, and since the students were asked to complete the instrument in September, students selected were actually sophomores and juniors during the past academic year (i.e. 1991-92).

Eight lists of all currently enrolled sophomores and juniors, who are not transfer students, were obtained from the Office of the Registrar in the following manner:

1. currently enrolled males who are younger than 26, who are not transfer students, who were enrolled full time as a sophomore or junior during the Fall of 1991 and Spring of 1992;

2. currently enrolled females who are younger than 26, who are not transfer students, who were enrolled full time as a sophomore or junior during the Fall of 1991 and Spring of 1992;
3. currently enrolled males who are 26 or older, who are not transfer students, and who were enrolled full time as a sophomore or junior during the Fall of 1991 and Spring of 1992;
4. currently enrolled females who are 26 or older, who are not transfer students, who were enrolled full time as a sophomore or junior during the Fall of 1991 and Spring of 1992;
5. currently enrolled males who are younger than 26, who are not transfer students, who were enrolled part time as a sophomore or junior during the Fall of 1991 and Spring of 1992;
6. currently enrolled females who are younger than 26, who are not transfer students, who were enrolled part time as a sophomore or junior during the Fall of 1991 and Spring of 1992;
7. currently enrolled males who are 26 or older, who are not transfer students, who were enrolled part time as a sophomore or junior during the Fall of 1991 and Spring of 1992; and
8. currently enrolled females who are 26 or older, who are not transfer students, who were enrolled

part time as a sophomore or junior during the Fall of 1991 and Spring of 1992.

The Office of the Registrar was able to produce two lists for each of the eight categories. One list consisted of all students who met the category criteria, while the other was a computerized random sample of up to 25 students taken from that list. Since the Office of the Registrar had difficulty in applying the category criteria, each list was verified for accuracy. The results of the verification process are outlined below and are summarized in Table 1 (p.54).

Category 1: Currently enrolled males who are younger than 26, who are not transfer students, who were enrolled full time as a sophomore or junior during the Fall of 1991 and Spring of 1992.

The lists produced by the Office of the Registrar indicated that 218 students met all of the above identified criteria. After reviewing the records of the 25 students randomly selected by the computer, 10 students were eliminated (1 was a transfer student, 5 were freshmen during the past year, 3 were not currently enrolled, and 1 was not enrolled during the Spring of 1992). Using a table of random numbers, 10 additional students were selected. In order to find an additional 10 students who met all of

the above identified criteria, a total of 17 students had to be randomly selected. Seven of the 10 students were eliminated because they had been freshmen during the past year).

Category 2: Currently enrolled females who are younger than 26, who are not transfer students, who were enrolled full time as a sophomore or junior during the Fall of 1991 and Spring of 1992.

The list produced by the Office of the Registrar indicated that 372 students met the above described criteria. Of the computerized random sample of 25 students, 8 students were eliminated (6 were freshmen during the past year and 2 were transfer students). Using a table of random numbers 8 additional students were selected. In order to obtain an additional 8 students who met all of the above criteria, a total of 14 students had to be randomly selected and six were eliminated (5 were freshmen during the past year and 1 was a senior during the past year).

Category 3: Currently enrolled males who are 26 or older, who are not transfer students, and who were enrolled full time as a sophomore or junior during the Fall of 1991 and Spring of 1992.

The list produced by the Office of the Registrar indicated that only 13 students met all of the above indicated criteria. After reviewing all 13 student records, only 5 students were eligible. Of the 8 students eliminated, 2 were freshmen during the past years, 3 were transfer students, 1 was not enrolled during the Fall of 1991 and 1 was not enrolled during the Spring of 1992. Finally, 2 additional students were acquired from category 7 (the students were actually attending college full time and not part time) bringing the total size to 7.

Category 4: Currently enrolled females who are 26 or older, who are not transfer students, who were enrolled full time as a sophomore or junior during the Fall of 1991 and Spring of 1992.

The list provided by the Office of the Registrar indicated that only 13 students met the above described criteria. After reviewing the records of all 13 students, 7 were selected to participate in this study. Of the 6 students who were eliminated from the study, 3 were freshmen during the past year, 2 were transfer students, and 1 was not enrolled during the Fall of 1991. Again, 2 additional students were acquired from category 8 (since they were attending college full time during the Fall of

1991 and Spring of 1992 and not part time), bringing the category size to 9.

Category 5: Currently enrolled males who are younger than 26, who are not transfer students, who were enrolled part time as a sophomore or junior during the Fall of 1991 and Spring of 1992.

The list provided by the Office of the Registrar indicated that 70 students met all of the category criteria. Of the 25 students randomly selected by the computer, only 1 student met all of the criteria. Of the 24 students eliminated, 15 attended college full time during the past year, 4 were not enrolled during the Spring of 1992, 3 were not enrolled during the Fall of 1991, 1 student was a freshman during the past year, and 1 student was a transfer student. In order to find an additional 24 students, the records of all remaining 45 students were reviewed. The review indicated that only an additional 8 students met all of the category criteria, bringing the sample size of this category to 9. Of the 37 students eliminated, 20 attended college full time during the past year, 8 were not enrolled during the Fall of 1991, 4 were not enrolled during the Spring of 1992, 2 were freshmen during the past year, 2 were transfer students and 1 was older than 25.

Category 6: Currently enrolled females who are younger than 26, who are not transfer students, who were enrolled part time as a sophomore or junior during the Fall of 1991 and Spring of 1992.

The list provided by the Office of the Registrar indicated that 122 students met the above criteria. Of the 25 students randomly selected by the computer, only 6 actually met all of the category criteria. Of the 19 students eliminated from the sample, 6 were full-time students during the past year, 5 were not enrolled during the Spring of 1992, 4 were not enrolled during the Fall of 1991, 3 were freshmen during the past year, and 1 student was not currently enrolled. Once again, all of the records of the remaining students (97) were reviewed with the goal of selecting an additional 19 students. However, of the 97 students remaining only 12 met all of the category criteria, bringing the total category size to 18. Of the additional 85 students eliminated from the sample, 33 were full-time students during the past year, 20 were not enrolled during the Spring of 1992, 14 were not currently enrolled, 12 were not enrolled during the Fall of 1991, 4 students were freshmen during the past year, 1 student was a transfer student, and 1 student was 26 years of age and was therefore added to category 8.

Category 7: Currently enrolled males who are 25 or older, who are not transfer students, who were enrolled part time as a sophomore or junior during the Fall of 1991 and Spring of 1992.

The list provided by the Office of the Registrar indicated that 30 students met the criteria for this category. However, of the 25 students randomly selected by the computer, only 6 actually met the category criteria. Of the 19 students who did not meet the criteria, 4 had attended college full time during the past year, 4 were not enrolled during the Fall of 1991, 4 were not enrolled during the Spring of 1992, 3 were not currently enrolled, 2 were transfer students, while 1 was a senior and 1 a freshman during the past year. Of the 5 remaining students, only 1 met all of the category criteria. Of the remaining 4 students who failed to meet the category criteria, 1 had been a full-time student during the past year, 1 was not enrolled during the Spring of 1992, 1 was a transfer student and 1 student was not currently enrolled. Two additional students were acquired from category 5 (since they attended college part time during the Fall of 1991 and Spring of 1992, not full time) bringing the total size for this category to 9.

Category 8: Currently enrolled females who are 26 or older, who are not transfer students, who were enrolled part time as a sophomore or junior during the Fall of 1991 and Spring of 1992.

The list provided by the Office of the Registrar indicated that 54 students met the category criteria. After reviewing the records of the 25 students randomly selected by the computer, it was determined that only 10 of those students actually met all of the criteria. The other 15 students were eliminated because 5 were not enrolled during the Spring of 1992, 4 were not enrolled during the Fall of 1991, 2 were not currently enrolled, 2 had been freshmen during the past year, 1 was a transfer student, and 1 student had been attending college full time during the past year.

Again, all records of the remaining 29 students were reviewed to determine if an additional 15 students could be added to the sample. The review indicated that only an additional 9 students met the category criteria. The remaining 20 students were eliminated because 8 were not enrolled during the Spring of 1992, 4 were not currently enrolled, 3 were attending college full time during the past year, 2 were freshmen during the past year, 2 were transfer students and 1 was not enrolled during the Fall

of 1991. One additional student was acquired from category 6, since she was 26 years of age, bringing the sample size of this category to 20.

Thus a total sample size of 122 was obtained.

Table 1
Sample Frame

Category	# Provided by Registrar	Number Eliminated	Eligible Sample
1 Male Younger than 26 Full time	218	17	25
2 Female Younger than 26 Full time	372	14	25
3 Male 26 or older Full time	13	8	7
4 Female 26 or older Full time	13	6	9
5 Male Younger than 26 Part time	70	61	18
6 Female Younger than 26 Part time	122	104	9
7 Male 26 or older Part time	30	21	9
8 Female 26 or older Part time	54	34	20
Total:	892	265	122

Since the sample frame provided a smaller sample than planned, the CNU Dean of Admissions was contacted for

feedback. The Dean indicated that 70-75% of the student body at Christopher Newport University consisted of transfer students, which is why out of 4,788 students enrolled in the Fall of 1992, only 892 (19%) were initially eligible to be part of the sample frame. The drop from 892 to an eligible 122 was primarily due to three factors: students enrolled full time initially and then dropped to part time status during the semester; students registered for overloads which classified them as seniors although they may be in their third year; and some students had transferred to other schools or dropped/stopped out.

To determine how drastically the transfer ratio would affect the generalizability of the study, a list of 23 Christopher Newport University peer institutions throughout the United States, as determined by the State Council of Higher Education in Virginia, was obtained. Institutional profiles, and specifically transfer rates, were acquired from the 1992 Peterson's Guide to Four-Year Colleges:

Table 2

Incoming Transfer Percentages of Christopher Newport
University and Its Peer Institutions

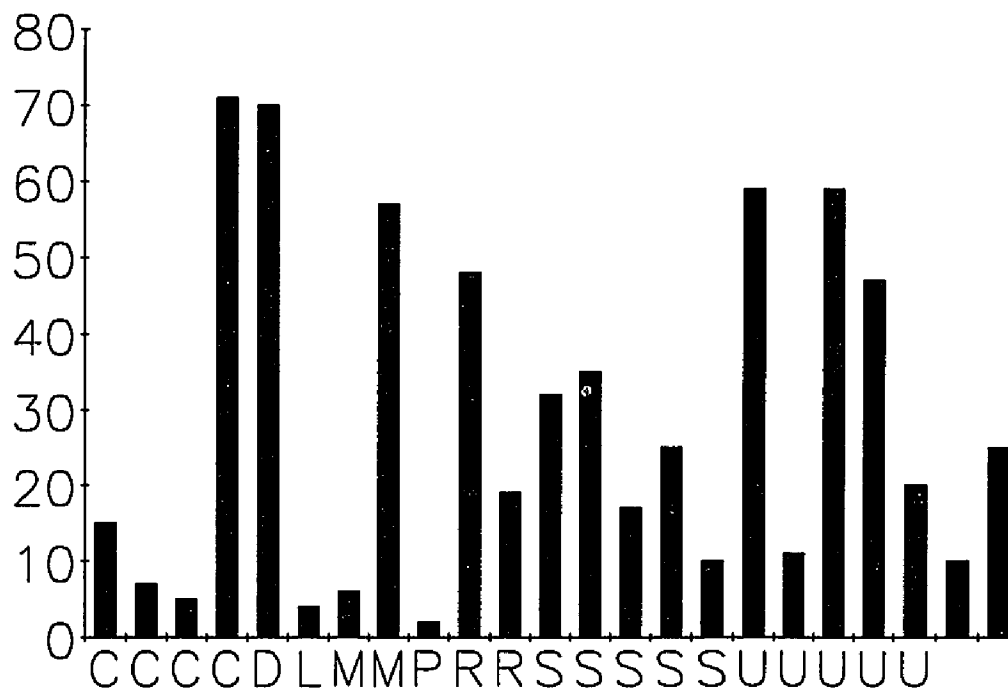
University	Transfer %
Cal State-Stanislaus	15
Carroll College (WI)	7
Central State U (OH)	5
Christopher Newport U	71
Dowling College (NY)	70
Loras College (IA)	4
Marist College (NY)	6
Metropolitan State (CO)	57
Providence College (RI)	2
Ramapo College (NJ)	48
Roanoke College (VA)	19
St John Fisher Coll (NY)	32
Stockton State Coll (NJ)	35
Sonoma State (CA)	17
SE Massachusetts U	25
S. Univ. at New Orleans	10
U Michigan-Dearborn	59
U Michigan - Flint	11
Utica Coll of Syracuse U	59
U Wisconsin-Green Bay	47
U Wisconsin-Parkside	20
Westfield State Coll (MA)	10
Wilkes College (PA)	25
<hr/>	
Mean:	28.61
Median	20
Mode	Multimodal
Range	73
Variance	529.52
Standard Deviation	23.01

This distribution is graphically displayed on page 57.

Thus, although Christopher Newport University is the highest point of this range, transfer percentages from other institutions indicate that Christopher Newport is not an anomaly.

Figure 1

Transfer Rates of Christopher Newport University and Its
Peer Institutions



Data Gathering Methods

The questionnaire was mailed to the subject pool accompanied by a letter of explanation (Appendix A-1), an instruction sheet (Appendix A-2), a form giving the researcher permission to use the subjects' GPAs (Appendix A-3) and an addressed and stamped return envelope. The completed CSEQ and signed GPA permission form were to be submitted to the Office of Student Life by Monday, September 21, 1992. As of Wednesday, September 23, 1992,

41 students had returned their completed questionnaires. Hence, 81 reminder postcards (Appendix A-4) were mailed to those who had not responded, encouraging their participation and extending the deadline for return to Friday, October 2, 1992. As of Thursday, October 8, 1992, an additional 15 questionnaires had been returned. Thus a new letter offering an additional incentive (Appendix A-5), and accompanied by a new questionnaire, was mailed on that date with a requested return date of Tuesday, October 20, 1992.

By Wednesday, October 21, 1992, an additional 15 questionnaires had been received bringing the response rate to 58% (71n). In an attempt to obtain a minimum response rate of 70%, the remaining 51 students were telephoned and asked if the instrument had been received and if it was possible to complete and return it to the Office of Student Life by Friday, October 23. Of the 51 students called, 21 could not be reached. Of the students reached 7 did not have an instrument, 1 student did not think her answers were relevant since she was a nontraditional student, and one said she was too busy to follow through. By Friday, October 23, an additional 27 completed questionnaires had been returned, bringing the response rate to 80% (98n).

Restatement of the Research Question and Hypotheses
Pertaining to the Quantitative Design

The quantitative research portion of this study was designed to provide insight into the following research questions:

As measured by the College Student Experiences Questionnaire, what is the nature of college student involvement on a commuter campus?

Based on this research question, the following hypotheses were formulated:

1. As commuter students, Christopher Newport University respondents have similar scores to the normative data collected at other Comprehensive Colleges and Universities.

2. There are differences between highly involved commuter college students and commuter college students who are minimally involved in the college experience.

3. Both traditional (younger than 26) and nontraditional age college students (26 and older) are represented at both ends (high and low college student involvement) of the distribution.

4. Full-time college students are more frequently represented in the high involved group than the low involved group.

5. Part-time college students are more frequently represented in the low involved group than the high involved group.

6. There is a positive correlation between involvement and GPA.

7. Students at the high end of the involvement distribution feel more satisfied with college.

8. More women than men are represented at the high end of the involvement distribution.

9. Students at the low end of the distribution and younger than 26 years of age are less satisfied with college, whereas students 26 and older will be more satisfied with college regardless of their involvement levels.

Data Analysis

Completed College Student Experiences Questionnaires were mailed to UCLA. The Center for the Study of Evaluation processed and returned the data. Chapter Four reports demographic frequencies, as well as analyses regarding quality of effort, student satisfaction, environmental ratings and educational gains. The analysis focused on only 13 of the 14 Quality of Effort scales. Since this study was undertaken at a commuter institution, the scales regarding residential facilities were omitted

from the analysis. Thus, the 13 Quality of Effort scales were viewed in four clusters of factors:

- 1 - academic, scholarly activities
- 2 - informal, interpersonal activities
- 3 - group facilities and organized activities
- 4 - science activities.

Similarly, the Environmental scales were combined to produce the following three factors:

- 1 - relationships
- 2 - scholarly
- 3 - vocational;

while the Estimate of Gains combined to produce five factors:

- 1 - personal/social
- 2 - science and technology
- 3 - general education, literature and arts
- 4 - intellectual skills
- 5 - vocational preparation.

Each factor, as well as the two questions regarding student satisfaction with college, were correlated with the respondents' GPA.

The independent variables under study were gender (male versus female), enrollment status (part time versus full time), and age (younger than 25 years of age versus 25 or older). The dependent variables included the four

Quality of Effort factors, the three Environmental factors, and the five Estimate of Gains factors, the Student Satisfaction index and GPA. Since a lack of an adequate sample prevented the use of a fully crossed 2 X 2 X 2 design, three sets of 2 X 2 designs were employed for multiple analyses of variance.

The Qualitative Design

Population and Sample

The population studied consisted of commuting students at Christopher Newport University (CNU). The sample was not intended to be representative of the student body, however. Based on the hypothesis that there are differences between highly involved commuter students and commuter students who are minimally involved, those college students who represented extreme cases of college student involvement, as measured by the sum of quality of effort scores, were asked to participate in the qualitative part of this study. Thus, the five most extreme scores at each end of the quality of effort distribution, of those agreeing to participate, constituted the sample (n=10).

Table 3
Students Contacted to Constitute the Qualitative Sample
for the High End of the Distribution

Quality of Effort Score	Agreed to Participate
370	Yes
368	Yes
368	Yes
359	Could not contact - telephone disconnected
329*	Yes
324-328**	Yes
322-338**	Left several messages - student would not return telephone calls
319	Yes
Total participants: 6*	

* This student did not agree to participate until after all five students had been identified. A few weeks later, the next student (324-328) cancelled the first interview and called back to say he did not have time to participate after all. This student replaced him bringing the total to 5 participants.

** Since scores were missing from the data, the score are reported as possible ranges.

Table 4

Students Contacted to Constitute the Qualitative Sample
for the Low End of the Distribution

Quality of Effort Score	Agreed to Participate
150	Did not return telephone messages
175	Yes
178	Did not return telephone messages
179	No - did not have the time
181	Yes
186	Yes
188	Yes
188*	Yes
Total participants: 5	

* This student completed the first interview and map exercise. The second interview was scheduled twice and he never attended. Several messages were left and the student did not return the telephone calls.

Data Gathering Methods

"Ethnographic significance is derived socially, not statistically, from discerning how ordinary people in particular settings make sense of the experience of their everyday lives" (Wolcott, 1988, p. 191). The qualitative component of this study was designed to gain insight into the commuter student experience. By closely examining the lives and perceptions of highly involved, and minimally involved, commuter students, this study focused on

discovering from students' frames of reference, what factors differentiate high quality of effort commuting college students from low quality of effort commuting college students.

Since the subject of this study involved the interplay of attitudes, values, beliefs, and assumptions of the subjects, data collection consisted of a triangulation of qualitative methods. More specifically, this study employed the use of field notes, semi-structured interviews, focus groups and self-administered questionnaires.

Upon agreeing to participate in the qualitative component of this study, each participant received a personal itinerary. The itineraries included the following components:

Step one: one-on-one, tape recorded, semistructured interview; this interview focused on gaining personal histories of the students. Questions were adapted according to the characteristics and interests of the student, but focused on the following:

- * Describe yourself.
- * How old are you (traditional vs. nontraditional)?

- * Are you attending college full or part time? Have you always attended college in this manner?
- * Do you have children? Ages?
- * Are either of your parents college educated?
- * Where do you live (independent vs. dependent)?
- * Would you describe yourself as a typical CNU student? Explain.
- * Please describe for me a typical day (which involves coming to CNU).
- * At what age did you decide to go to college?
- * What do you think a college education will do for you?
- * How important is a college education for you?
- * Why did you decide to go to college? What did you think college would be like?
- * How did you select Christopher Newport University?
- * What goals did you have when you entered CNU?
- * What are your career aspirations?
- * What is your major?
- * Have you ever thought about transferring? Why or why not?
- * If a prospective college student asked you to share your experiences at CNU, what would you say?
- * What do you like most about college?
- * What do you like least about college?
- * Describe the commuter student experience. How do

you feel about being a commuter student?

- * Is there anything else you would like to talk about today?

At the completion of the interview the participants were asked to create a personal map of the college as they knew and experienced it.

Step two: one-on-one, tape recorded, semistructured interview; this interview focused on student involvement and the college experience. Before asking the questions, students were given a copy of the College Student Experiences Questionnaire and asked to skim the different areas to provide a frame of reference on which to base this interview.

Interview questions included the following:

- * Tell me what it is like to be a Christopher Newport University student.
- * Describe the student body at CNU.
- * What experiences have had the greatest impact on your education?
- * What does student involvement mean to you? Give some examples of how CNU students are involved.
 - if examples given are narrowly focused on club membership ask:
 - * Are there alternative ways (in addition

to club membership) in which CNU students exhibit involvement? Explain.

* Do you consider yourself to be involved? Why or why not?

- if yes:

* Why did you become involved in these things? How did you become involved in these things? When did you become involved in these things?

- if no:

* Why haven't you become involved?

* How do you feel about your involvement?

* Please describe your relationship with your professors.

* How would you describe your academic experience?

* What have been the most significant problems you have encountered during college?

* What have been the greatest satisfactions derived from your college experiences?

* If you had college to do all over again, would you do anything differently? Explain.

* Do you own anything that has the name CNU on it (e.g. T-shirt)?

* Currently, who do you consider to be your five best friends? Are any of them CNU students, faculty or staff?

- * Identify any professors and/or administrators you have spoken to outside of class (for administrators, outside their offices). How would you describe your relationship to these individuals?
- * Who is your favorite professor? Why?
- * Have you ever attended a lecture on campus, not as a course requirement?
- * Have you attended any CNU theater productions?
- * How often do you read the college newspaper? Have you ever placed a tape-a-quarter ad in the newspaper?
- * Have you ever attended a CNU workshop to promote personal development (time management, leadership)?
- * Which students services, if any, have you used? Describe your experiences.
- * What is the most memorable activity you participated in outside of the classroom?
- * Which CNU buildings have you used most? Are there any buildings you have never entered?
- * Have you ever completed an application for the Student Leadership Institute? Why or why not?
- * One researcher has delineated six types of students: the scholar, the social activist, the artist, the partier, the leader, and the status striver. Which of these descriptors do you think

best describes you in the context of your college experiences?

- * Please describe for me you as you were beginning your college career and you now.
- * Is there anything else you would like to talk about today?

This interview concluded by asking the student to write an answer to the following two questions: Please describe an incident in your college life that made you feel proud to be a CNU college student. Please describe an incident in your college life that made you feel uncomfortable to be a CNU college student. These questions were given to each student in closed and numbered envelopes (1 and 2), and in random order, so that half of the subjects read and respond to the positive question first, and vice versa.

Step three: For a period of two weeks each subject completed a time inventory sheet and questionnaire.

Step four: Two focus groups were conducted, one for high involved students, the other for low involved students. The purpose of the focus groups was to conduct an informal discussion on the students' views

of involvement, to solicit their recommendations for facilitating student involvement, and to process their experiences as subjects in this research study. These groups were led by an educational consultant and licensed professional counselor. The researcher was not present. The focus groups were tape recorded.

Table 5

Student Participation In Qualitative Segment

QE Score	I-1	Map	I-2	CI	TM	FG
370	Yes	Yes	Yes	Yes	Yes	No
368	Yes	Yes	Yes	Yes	Yes	Yes
368	Yes	Yes	Yes	Yes	Yes	Yes
329	Yes	Yes	Yes	Yes	Yes	No
319	Yes	Yes	Yes	Yes	Yes	No
188	Yes	Yes	No	No	No	No
188	Yes	Yes	Yes	Yes	Yes	No
186	Yes	Yes	Yes	Yes	Yes	Yes
181	Yes	Yes	Yes	Yes	Yes	No
175	Yes	Yes	Yes	Yes	Yes	Yes

Key: QE Score - Quality of Effort Score
 I-1 - Interview One
 Map - Personal Map Exercise
 I-2 - Interview Two
 CI - Critical Incidents Exercise
 TM - Time Monitor Exercise
 FG - Focus Group

Note regarding focus group attendance: #370 did not participate in the focus group because he was unable to find the location - he asked my office staff and they were unable to help him; #329 forgot; #319 contacted me in advance to say she was working during that time; #181 was unable to participate due to scheduling conflicts

Restatement of the Research Question and Hypotheses
Pertaining to the Qualitative Design

The qualitative research portion of this study was designed to provide insight into the following research questions:

1. What is the nature of college student involvement on a commuter campus?
2. What are the profiles of highly involved commuter college students? How do they compare to commuter college students who are minimally involved?
3. Are commuter students with certain characteristics and experiences more likely to participate in some activities and not others?
4. Are there institutional factors and conditions associated with college student involvement on a commuter campus?
5. What are commuter college students' perceptions regarding the opportunity for student involvement? If it is believed to be limited, is the limitation believed to be self-imposed or institutionally imposed.
6. How are commuter students, who are minimally involved in the college experience, utilizing their time? Are they involved in educationally related activities outside the campus? Do they feel part of the campus community?

Based on these research questions, the following hypotheses were formulated:

1. There are differences between highly involved commuter college students and commuter college students who are minimally involved in the college experience.

2. A college student subculture epitomizing the collegiate way exists within a commuter campus.

3. Time monitoring inventories indicate that less involved students have time available for involvement.

4. When asked to describe their college student experiences, highly involved students are more comprehensive and use a broader definition of involvement, while those students less involved utilize a more restrictive definition of involvement, have more restrictive relationships with professors, and are less aware of student services and involvement opportunities.

Data Analysis

"Data" analysis primarily involved synthesizing the observations collected to describe and compare the two groups of commuter college students and to interpret how the experiences of these college students made sense to them. Procedures included organization of data; generation/identification of units, categories and themes; testing of emerging hypotheses against the data; seeking alternative explanations for data by challenging the

themes that seemed to be emerging; and writing a report of findings (Marshall and Rossman, 1989).

CHAPTER 4

QUANTITATIVE ANALYSIS OF RESULTS

In this chapter data analysis from the quantitative design is presented. Thus, this chapter consists of a presentation of the data analysis intended to answer the research question and hypotheses from the quantitative design. Interpretations and explanations of the findings are discussed in Chapter Six.

Quantitative Results

Description of the Sample

As described in the previous chapter, the sample frame was college students at Christopher Newport University. Due to issues associated with an acculturation process, freshmen and transfer students were eliminated from the subject pool. In addition, seniors were also eliminated from the subject pool since they are often more focused on bringing closure to their collegiate experiences as they prepare to leave the institution. Thus, the sample frame consisted of 98 currently enrolled sophomores and juniors whose entire college experience was at Christopher Newport University. The sample was

stratified to represent eight categories as depicted below:

	<u>Age < 26</u>				<u>Age >=26</u>			
Part Time	I	I	I	I	I	I	I	I
	I Male	I Female	I Male	I Female	I Male	I Female	I Male	I Female
Full Time	I	I	I	I	I	I	I	I
	I Male	I Female	I Male	I Female	I Male	I Female	I Male	I Female

A verification process of all eight lists resulted in a reduction of an eligible 892 currently enrolled students meeting the criteria to 627 students. Sixty-six percent of those student were enrolled full time and younger than 26. Thus the final subject pool (122 students) resulted from random sampling of the enrolled full time and younger than 26 categories and inclusions of all other students who met the remaining category criteria. The College Student Experiences Questionnaire (CSEQ) was mailed to the subject pool and a final response rate of 80% (n=98) was attained.

Background information contained in the College Student Experiences Questionnaire, and relevant to this study, includes the following: age, gender, marital status, type of residence, college grades, major, level of parents' education, intentions of pursuing an advanced degree, enrollment status, time spent on college and related activities, time spent working, expenses provided by family and racial or ethnic identification. Based on 98 returned questionnaires, frequencies and percentages for

this demographic information are presented in tables 6-19 as follows:

Table 6
Age of Students

<u>Label</u>	<u>Frequency</u>	<u>Percent</u>
22 or Younger	52	53.1
23-27	13	13.3
28 or Older	33	33.7
TOTAL	98	100

For the purpose of this study age was further collapsed to two ranges: younger than 26 and 26 or older. Those frequencies and percentages are included in Table 7.

Table 7
Age of Students

<u>Label</u>	<u>Frequency</u>	<u>Percent</u>
Younger than 26	60	61.2
26 or Older	38	38.8
TOTAL	98	100

Table 8 presents both the gender for the sample as well as for the Christopher Newport University student body during the Fall of 1992:

Table 8

Gender of Students

<u>Label</u>	<u>Sample Frequency</u>	<u>Sample Percent</u>	<u>CNU Frequency</u>	<u>CNU Percent</u>
Male	43	43.9	1963	41.0
Female	55	56.1	2825	59.0
TOTAL	98	100	4788	100

Table 9

Marital Status

<u>Label</u>	<u>Frequency</u>	<u>Percent</u>
Single	68	70.1
Married	29	29.9
TOTAL	97	100

Table 10

Residence

<u>Label</u>	<u>Frequency</u>	<u>Percent</u>
Apt. Close to College	2	2.1
Apt. Far from College	44	46.3
With Relatives	49	51.6
TOTAL	95	100

Table 11
Average College Grades

<u>Label</u>	<u>Frequency</u>	<u>Percent</u>
C, C-, or Lower	8	8.2
B-, C+	30	30.6
B	30	30.6
A-, B+	21	21.4
A	9	9.2
TOTAL	98	100

Christopher Newport University GPA data for the Fall of 1992 were as follows:

All Students	2.63
Males	2.53
Females	2.69
Part Time	2.58
Full Time	2.65
Freshmen	2.18
Sophomore	2.54
Junior	2.73
Senior	2.95

Table 12 presents both student major for the sample as well as for the Christopher Newport University student body during the Fall of 1992:

Table 12

Major

<u>Label</u>	<u>Sample Frequency</u>	<u>Sample Percent</u>	<u>CNU Frequency</u>	<u>CNU Percent</u>
Arts	5	5.3	110	2.3
Biological Sciences	9	9.6	302	6.3
Business	25	26.6	1101	23.0
Computer Science	6	6.4	282	5.9
Education	3	3.2	144	3.0
*Engineering	3	3.2	---	---
Health Related Field	6	6.4	172	3.6
Humanities	6	6.4	417	8.7
Physical Sciences	4	4.3	172	3.6
Social Sciences	10	10.6	847	17.7
*Area Studies	1	1.1	---	---
Interdept. Studies	2	2.1	29	.6
Other	12	12.8	---	---
Undecided	2	2.1	1221	25.5
TOTAL	94	100	4797	100.2

* Since Christopher Newport University does not report having these majors, the three students majoring in Engineering are probably reporting an emphasis (not a major), while the one student reporting a major in Area Studies may be designing his or her major.

Table 13

Either Parent Graduate from College

<u>Label</u>	<u>Frequency</u>	<u>Percent</u>
No	56	57.1
Yes, Both Parents	15	15.3
Yes, Father Only	17	17.3
Yes, Mother Only	10	10.2
TOTAL	98	100

Table 14

Expect to Enroll for Advanced Degree

<u>Label</u>	<u>Frequency</u>	<u>Percent</u>
Yes	58	59.2
No	40	40.8
TOTAL	98	100

Table 15 depicts frequencies and percentages of the enrollment status of students attending Christopher Newport University during the Fall of 1992 for both the sample and the student body.

Table 15

Enrollment Status

<u>Label</u>	<u>Sample Frequency</u>	<u>Sample Percent</u>	<u>CNU Frequency</u>	<u>CNU Percent</u>
Full Time	56	57.1	2933	61.3
Part Time	42	42.9	1855	38.7
TOTAL	98	100	4788	100

Table 16

Time Spent on College and Related Activities

<u>Label</u>	<u>Frequency</u>	<u>Percent</u>
Less than 20 Hrs/Wk	20	20.4
About 20 Hrs/Wk	33	33.7
About 30 Hrs/Wk	25	25.5
About 40 Hrs/Wk	12	12.2
About 50 Hrs/wk	8	8.2
TOTAL	98	100

Table 17
Time Spent Working

<u>Label</u>	<u>Frequency</u>	<u>Percent</u>
None, Not Employed	17	17.7
About 10 Hrs/Wk	7	7.3
About 15 Hrs/Wk	10	10.4
About 20 Hrs/Wk	19	19.8
About 30 Hrs/Wk	12	12.5
More Than 30 Hrs/Wk	31	31.6
TOTAL	96	100

Table 18
Expenses Provided by Family

<u>Label</u>	<u>Frequency</u>	<u>Percent</u>
All or Nearly All	29	29.9
More than Half	8	8.2
Less than Half	10	10.3
None or very Little	50	51.5
TOTAL	97	100

Table 19 depicts frequencies and percentages of ethnic identification for both the sample and the student body of Christopher Newport University for the Fall of 1992.

Table 19

Race or Ethnic Identification

<u>Label</u>	<u>Sample Frequency</u>	<u>Sample Percent</u>	<u>CNU Frequency</u>	<u>CNU Percent</u>
Asain	3	3.1	102	2.1
Black	10	10.4	643	13.4
Hispanic	2	2.1	83	1.7
White	80	83.3	3921	81.9
Other	1	1.0	39	.8
TOTAL	96	100	4788	99.9

Thus, Tables 6-19 provide some descriptive information about the sample and in general demonstrate that the sample was representative of the Christopher Newport University population. In particular, gender, enrollment status, and race or ethnic identification distributions were comparable. Students in the sample, however, tended to have slightly higher grades than the mean for the Christopher Newport student body. Although the distribution regarding majors was comparable, the Christopher Newport data indicated a higher percentage of CNU students were undecided. This may be reflective of how the University collects its data. In other words, the CNU data for undecided majors may include students who have selected a major but have not yet declared that major with the University. Difference in percentages may also reflect the fact that there are no freshmen in the sample, since

freshmen tend to be more likely than upperclassmen to have not declared a major.

Furthermore, Tables 6-19 demonstrate that slightly more than half of the students in the sample are younger than 26 and enrolled full time. These data are comparable to national trends. The fact that none, or very little of their college expenses are provided by the students' families is somewhat consistent with the national trend indicating that approximately two thirds of commuting students are independent. And finally, Table 17 shows that the majority of students in the sample are employed and almost two thirds of those students work more than 30 hours per week. Thus, in general, it appears that sample distributions were consistent with profiles of commuter students as found in the existing literature.

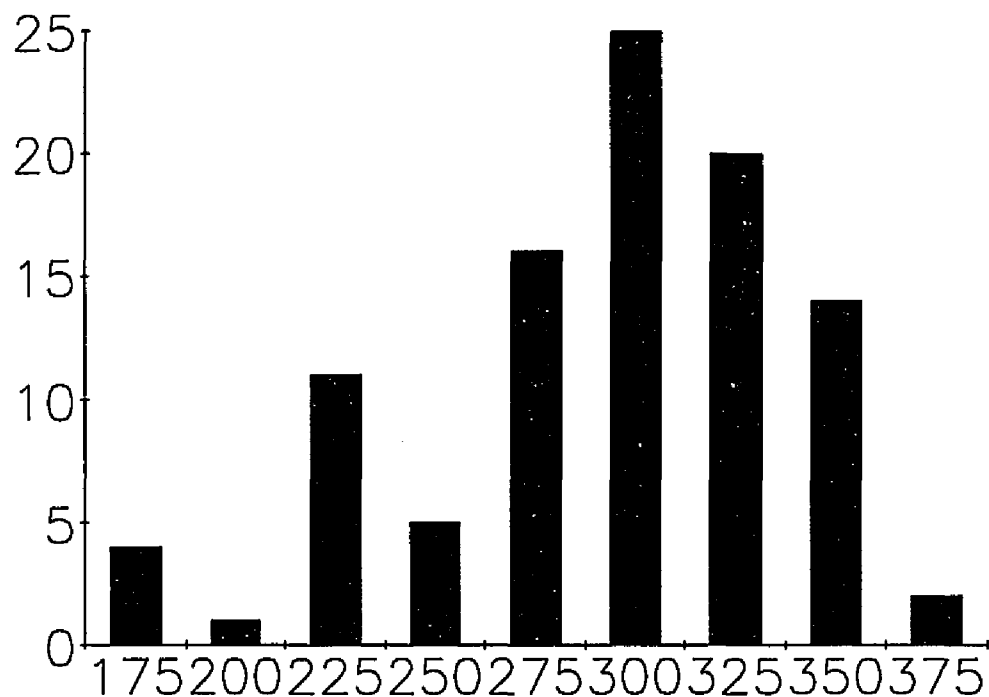
Findings

The College Student Experiences Questionnaire was utilized to answer the following research question:

As measured by the College Student Experiences Questionnaire, what is the nature of college student involvement on a commuter campus?

To begin to examine this question it was first helpful to look at a distribution of the respondents quality of effort scores:

Figure 2

Distribution of Quality of Effort Scores*Frequencies**CSEQ Scores*

The distribution is multimodal with a median of 238, a mean of 245.73 and standard deviation of 46.29. The minimum score was 150 and the maximum was 370, thus the range = 220, while variance = 2143.19. The distribution is therefore slightly skewed to the right.

Three hypotheses were formulated based on what the distribution would look like. All three hypotheses

examined the distribution of the sum of quality of effort scores. Thus for the purpose of analysis, the sum of the quality of effort scores were divided into three categories based on the mean minus half of a standard deviation $\{245.73 - (46.29/2) = 222.58\}$, and the mean plus half of a standard deviation $\{245.73 + (46.29/2) = 268.88\}$. Thus the three categories were defined as follows:

Low quality of effort	= any score < 222 n=31
Medium quality of effort	= 222-269 n=45
High quality of effort	= any score > 269 n=22

Presented below are each of the three hypotheses. Each hypothesis is presented in both its research and statistical form, followed by a chi-square test of association.

1. Both traditional (younger than 26) and nontraditional (26 and older) age college students are represented at both ends of the quality of effort distribution.

Null hypothesis: $H_0 = \text{PI1} = \text{PI2}$

A chi-square test of association was used to test for significance:

Quality of Effort Group

	I	Low	I	Medium	I	High	I	
Younger than 26	I	n = 10	I	n = 17	I	n = 13	I	n=40
	I	r%= 25	I	r%= 42.5	I	r%= 32.5	I	r=53.3
	I	c%= 41.7	I	c%= 48.6	I	c%= 81.3	I	
26 or Older	I	n = 14	I	n = 18	I	n = 3	I	n=35
	I	r%= 40	I	r%= 51.4	I	r%= 8.6	I	r=46.7
	I	c%= 58.3	I	c%= 51.4	I	c%= 18.8	I	
		n = 24		n = 35		n = 16		n=75
		c = 32		c = 46.7		c = 21.3		Total=100

Pearson chi-square = 6.64
 Degrees of freedom = 2
 Observed significance level = .04

Since .04 is less than .05, the null hypothesis, that age and quality of effort are independent, is rejected. Thus there appears to be an association between quality of effort and age. Although it appears to be true that both traditional and nontraditional age college students were represented at both ends of the quality of effort distribution, the proportion of students at the low end of the distribution was greater for students 26 and older while the proportion of the students at the high end of the distribution was greatest for students younger than 26.

2. Full-time college students are more frequently represented in the high involved group than the low involved group and the converse is true for part-time students.

Null hypothesis: $H_0 = \pi_1 = \pi_2$

A chi-square test of association was used to test for significance:

		Quality of Effort Group				
		Low	Medium	High		
Full Time	n =	7	22	12	n=41	
	r% =	17.1	53.7	29.3	r=54.7	
	c% =	29.2	62.9	75.0		
Part Time	n =	17	13	4	n=34	
	r% =	50	38.2	11.8	r=45.3	
	c% =	70.8	37.1	25		
		n = 24	n = 35	n = 16	n=75	
		c = 32	c = 46.7	c = 21.3	Total=100	

Pearson chi-square = 9.91
 Degrees of freedom = 2
 Observed significance level = .01

Since .01 is less than .05, the null hypothesis, that enrollment status and quality of effort are independent, is rejected. Thus there appears to be a relationship between quality of effort and enrollment status. Hence, although it is true that both full and part-time college students were represented at both ends of the quality of effort distribution, the proportion of students at the low end of the distribution was greater for part-time students while the proportion of the students at the high end of the distribution was greatest for full-time students.

3. More women than men are represented at the high end of the involvement distribution.

Null hypothesis: $H_0 = \pi_1 = \pi_2$

A chi-square test of association was used to test for significance:

		Quality of Effort Group				
		Low	Medium	High		
Men	n =	9	14	7		n=30
	r% =	30	46.7	23.3		r=40
	c% =	37.5	40	43.8		
Women	n =	15	21	9		n=45
	r% =	33.3	46.7	20		r=60
	c% =	62.5	60.0	56.3		
		n = 24	n = 35	n = 16		n=75
		c = 32	c = 46.7	c = 21.3		Total=100

Pearson chi-square = .16
 Degrees of freedom = 2
 Observed significance level = .92

Since .92 is greater than .05, the null hypothesis of no association between the two factors of quality of effort and gender is not rejected. Thus, any difference in frequency distribution is most likely attributed to chance, not gender.

Based on the research question (As measured by the CSEQ, what is the nature of college student involvement on a commuter campus?), it was further hypothesized that as commuter students, Christopher Newport University respondents will have similar scores as compared to the normative data collected at other Comprehensive Colleges and Universities. Provided below is a summary of means and standard deviations on quality of effort scales,

environmental ratings and the satisfaction index, for both Christopher Newport University (CNU) and the normative data on comprehensive colleges and universities (CCU) provided by the Center for the Study of Evaluation at the University of California - Los Angeles. The norms are derived from 6,409 students from 18 comprehensive colleges and universities.

Table 20

Summary of Means and Standard Deviations on Quality of Effort Scales

QE Scales	CNU			CCU	
	M	SD	(n)	M	SD
Library	19.28	5.06	(97)	20.0	4.9
Faculty	18.66	5.07	(96)	20.4	5.5
Course Learning	27.81	5.01	(97)	29.2	5.1
Art, Music, Theatre	17.01	6.08	(91)	19.4	6.1
Student Union	16.59	5.58	(95)	20.3	6.3
Athletic/Recreation	14.66	5.25	(95)	18.3	7.3
Clubs/Organizations	15.99	7.02	(95)	19.2	7.2
Writing	24.45	6.08	(98)	25.7	5.9
Personal	18.50	5.50	(97)	22.1	5.9
Student Acquaint.	21.93	7.10	(97)	25.0	6.5
Science	17.73	6.67	(95)	15.5	5.2
Topics Conversation	20.89	5.92	(94)	28.7	6.0
Info. Conversation	13.19	3.04	(98)	14.5	3.3

This table provides some evidence that Christopher Newport students are similar to students at other comprehensive colleges and universities with regard to quality of effort. To further substantiate this hypothesis, independent T-tests were computed to test for statistical significance:

Table 21

Summary of T-Test Analysis for Quality of Effort

OE Scale	df	t Value
Library	6504	-1.47
Faculty	6503	-3.16*
Course Learning	6504	-2.73*
Art, Music, Theatre	6498	-3.92*
Student Union	6502	-5.89*
Athletic & Recreation	6502	-4.99*
Clubs & Organizations	6502	-4.46*
Writing	6505	-2.12*
Personal	6504	-6.10*
Student Acquaintances	6504	-4.72*
<i>Science</i>	6502	4.29*
Topics of Conversation	6501	-13.02*
Information Conversation	6505	-3.97*

*p<.05

Note: bold indicates negative significance, italic positive significance, and plain text no significance

Thus, although Christopher Newport students looked similar to students at other comprehensive colleges and universities in Table 20, t-tests indicated statistical significance in all areas except for library. It should be further noted that means for the quality of effort scales for Christopher Newport students were lower than the means for students at other comprehensive colleges and universities, except for the area of science. Therefore, it may be concluded that students at Christopher Newport University put forth more effort toward science, demonstrate no difference in their quality of effort toward library activities, and put forth less effort in all other areas indicated in Tables 20 and 21, as measured by the CSEQ, when compared to a national sample of comprehensive college and university students.

Table 22

Summary of Means and Standard Deviations on the
Satisfaction Index

	CNU			CCU	
	M	SD	(n)	M	SD
Satisfaction Index	6.24	1.08	(98)	6.2	1.3

Table 22 also appears to provide evidence that Christopher Newport students are similar to students at other comprehensive colleges and universities with regard to satisfaction. In terms of statistical evidence, an

independent t-test produced the following results:
 $t(6505) = .31, p > .05$. Thus, since the null hypothesis cannot be rejected, it appears that Christopher Newport University students are not different from students at other comprehensive colleges and universities with regard to their satisfaction with the college experience.

Table 23

Summary of Means and Standard Deviations on Environmental Ratings

Environmental Ratings	CNU			CCU	
	M	SD	(n)	M	SD
Scholarly Qualities	5.29	1.10	(98)	5.4	1.2
Esthetic Qualities	4.60	1.31	(98)	4.7	1.3
Critical Skills	5.13	1.26	(98)	4.9	1.2
Vocational Competence	4.67	1.35	(98)	4.8	1.4
Practical Values	4.86	1.35	(98)	4.9	1.3
Relationships w/ stud	5.09	1.51	(98)	5.5	1.3
Relationships w/ fac	5.38	1.22	(98)	5.3	1.3
Relationships w/admin	4.38	1.77	(98)	4.4	1.6

Once again this table provides evidence that Christopher Newport students are similar to students at other comprehensive colleges and universities with regard to environmental ratings. Independent t-tests produced the following statistical data:

Table 24

Summary of T-Test Analysis for Environmental Ratings

<u>Environment</u>	<u>df</u>	<u>t Value</u>
Scholarly Qualities	6505	-.92
Esthetic Qualities	6505	-.77
Critical Skills	6505	1.92
Vocational Competence	6505	-.93
Practical Values	6505	-.31
Relationships w/ students	6505	-3.15*
Relationships w/ faculty	6505	.62
Relationships w/ admin	6505	-.13

*p<.05

Thus, based on the statistical evidence presented above, only the null hypothesis for environmental ratings regarding relationships with other students may be rejected. Therefore, it appears that Christopher Newport University students are similar to students at other comprehensive colleges and universities with regard to their ratings of the college environment, with the one exception being that Christopher Newport University students rate relationships with other students lower than do students at other comprehensive colleges and universities, as measured by the CSEQ.

The final section of the College Student Experiences Questionnaire asks students to rate their progress toward objectives of a college education. These results are best

summarized by adding the percent of students who estimated "quite a bit" and "very much" progress. Pace (1987) calls this "substantial progress". A summary of the percent of both CNU and CCU students reporting substantial gains toward educational goals is reported in Table 25. The educational goals are listed in rank order from high to low percent according to the Christopher Newport data.

Table 25
Summary of Percent of Students Reporting Substantial
 Progress Toward Educational Goals

Goals	CNU		CCU	
	%	Rank	%	Rank
Career Information	74.5	1	69	4
General Education	73.4	2	66	6
Ability to Learn on Own	72.4	3	79	1
Ability to put ideas Together	66.0	4	68	5
Self-understanding	61.2	5	75	3
Specialized Knowledge	57.2	6	57	10
Critical Thinking	57.1	7	59	9
Vocational Training	54.1	8	48	12
Writing Skills	52.1	9	56	11
Value Development	52.0	10	62	7
Awareness of Philosophies	48.4	11	44	14.5
Computer skills	48.0	12	28	19.5
Understanding others	45.9	13	77	2
Importance of History	44.9	14	*new item	
Ability to be a Team Member	42.8	15	60	8
Quantitative Thinking	42.2	16	44	14.5
Gain Global Knowledge	41.8	17	*new item	
Understanding Science	31.6	18	32	16.5
Expanding Literature	29.6	19	32	16.5
Awareness of Conseq Tech	28.6	20	31	18
Understanding Technology	27.6	21	27	21
Appreciation for the Arts	27.5	22	28	19.5
Developing wellness habits	27.5	23	47	13

Thus Table 25 indicates that Christopher Newport students felt they gained most with regard to career information, general education, the ability to learn on their own, the ability to put ideas together and self-understanding. Interestingly, although not in the exact order, students at other comprehensive colleges and universities identified the same areas for their greatest gains with the exception of general education. While Christopher Newport students reported they made substantial progress in the area of general education (ranked #2), students from other comprehensive colleges and universities ranked general education sixth and instead reported substantial gains in understanding others. Christopher Newport students however, ranked understanding others 13 out of 23 items. This is interesting given that this study demonstrated that one of the significant obstacles to college student involvement for Christopher Newport students was the difficulty in forming peer relationships. This finding will be discussed in further detail in Chapter Six.

On the other hand, Christopher Newport students believed they gained least in their awareness of the consequences of technology, their appreciation for the arts, and in developing wellness habits. Again, similar to the comparison of most substantial gains, all but one of the areas of least substantial gains were the same for

both Christopher Newport students and students at other comprehensive colleges and universities. Christopher Newport students identified developing wellness habits as one of the lowest areas in which they felt they gained substantially, while students at other comprehensive colleges and universities ranked this area 13th. The area that students from other comprehensive colleges and universities reported least substantial gains in was computer skills, while students at Christopher Newport ranked their gains in computer skills 12th.

The next hypothesis tested examined whether there was a positive correlation between GPA and involvement. Thus, since all data were interval data, a Pearson Correlation Coefficient was calculated on the four quality of effort scales, the three environmental ratings, the five estimates of gains factors and the student satisfaction index. The results can be found in Table 26.

Table 26

Pearson Correlation Coefficients of GPA and the College
Student Experiences Questionnaire

GPA * CSEQ Factor	Correlation Coefficient	n	Probability
QE1	.16	(94)	.13
QE2	-.05	(86)	.64
QE3	-.03	(90)	.78
QE4	-.06	(95)	.88
E1	.10	(98)	.32
E2	.09	(98)	.40
E3	.17	(98)	.10
G1	-.23	(98)	.02*
G2	-.05	(98)	.60
G3	.04	(97)	.68
G4	.16	(96)	.12
G5	.08	(98)	.43
Satisfaction	.12	(98)	.25

*p<.05

Thus, the only correlation to reach significance was between GPA and self-estimated gains in the area of personal/social development (G1). The correlation was a negative one ($r=-.23$). This finding will be discussed in further detail in Chapter Six.

The next hypothesis: Students at the low end of the distribution and younger than 26 are less satisfied with college, whereas students 26 and older are more satisfied with college regardless of their involvement levels. This required an analysis of variance to determine whether the difference between these variable means were greater than would be expected from sampling error alone. Presented below is the factorial design, null hypothesis, summaries of means and statistical results.

Independent Variables

Age (younger than 26; 26 or older)

Sum of Quality of Effort Scores (low, medium, high)

Factorial Design

	< 26	≥ 26
Low QE	I n = 10	I n = 14
	I	I
Medium QE	I n = 17	I n = 18
	I	I
High QE	I n = 13	I n = 3
	I	I

Total n = 75

Null Hypothesis

There are no differences among the independent variables of age and sum of quality of effort scores, as measured by the satisfaction index, other than would be expected from sampling error alone.

Ho: M1 = M2 = M3 = M4 = M5 = M6

Summaries of Satisfaction by Levels of Age and Sum of QE

<u>Variable</u>	<u>Mean</u>	<u>Std Dev</u>	<u>Cases</u>
For entire sample	6.17	1.09	75
Younger than 26			
Low QE	5.90	.74	10
Medium QE	5.70	.92	17
High QE	6.38	1.19	13
20 and Older			
Low QE	6.36	1.15	14
Medium QE	6.39	1.29	18
High QE	6.67	.58	3

Test of Significance

<u>Source of Variation</u>	<u>Sum of Squares</u>	<u>df</u>	<u>Mean Square</u>	<u>F Value</u>	<u>Sig</u>
Within Cells	81.67	69	1.18		
Age	2.91	1	2.91	2.46	.12
Sum of QE	1.75	2	.88	.74	.48
Age by Sum of QE	.38	2	.19	.16	.85

p<.05

Thus, none of the F values were significant enough to reject the null hypothesis and therefore it was concluded that age, sum of quality of effort scores, and the interaction of age and sum of quality of effort scores, did not contribute to an increase in satisfaction.

The final hypothesis simply stated that there are differences between highly involved commuter college students and commuter college students who are minimally involved in the college experience. To measure this assumption, the concept of involvement was analyzed as four quality of effort factors, three environmental factors, five estimate of gains factors and grade point average. Based on sampling, the analysis focused on the independent variables of gender, age and enrollment status. Thus, to test this hypothesis, the analysis required multiple comparisons of group means. Since more than two means would be compared, t-tests were inappropriate because type-I error (rejecting the null when it is true) would accumulate. Thus, a series of analyses of variance (ANOVA's) was performed. For each statistical test performed, a factorial design, null hypothesis, summaries of means and statistical results are outlined below.

Statistical Tests for Quality of Effort Scales - 1

(Academic and Scholarly Activities)

Independent variables:

Age (younger than 26; 26 or older)

Enrollment status (full time; part time)

1. Factorial Design:

	< 26		> 26	
Full Time	I	n = 40	I	n = 14
	I		I	
Part Time	I	n = 16	I	n = 24
	I		I	

Total n = 94

2. Null Hypothesis

There are no differences among the independent variables of age and enrollment status, as measured by the quality of academic and scholarly effort, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of QE1 by levels of age and enrollment status:

<u>Variable</u>	<u>Mean</u>	<u>Std Dev</u>	<u>Cases</u>
For entire sample	90.17	16.02	94
Younger than 26			
Full Time	89.65	15.71	40
Part Time	90.19	16.75	16
26 and Older			
Full Time	97.00	17.98	14
Part Time	87.04	14.63	24

4. Tests of Significance

<u>Source of Variation</u>	<u>Sum of Squares</u>	<u>df</u>	<u>Mean Square</u>	<u>F Value</u>	<u>Sig</u>
Within Cells	22960.50	90	255.12		
Age	88.11	1	88.11	.35	.56
Enrollment	442.44	1	442.44	1.73	.19
Age by Enroll	549.18	1	549.18	2.15	.15

p < .05

Thus, none of the F values were significant enough to reject the null hypothesis and therefore it was concluded that age, enrollment, and the interaction of age and enrollment, did not contribute to an increase in the quality of academic and scholarly efforts.

Independent variables:

Age (younger than 26; 26 or older)

Gender (male; female)

1. Factorial Design:

	<u>< 26</u>	<u>≥ 26</u>	
Male	I n = 27	I n = 14	I
	I	I	I
Female	I n = 29	I n = 24	I
	I	I	I
	Total n = 94		

2. Null Hypothesis

There are no differences among the independent variables of age and gender, as measured by the quality of academic and scholarly effort, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of QE1 by levels of age and gender:

Variable	Mean	Std Dev	Cases
For entire sample	90.17	16.02	94
Younger than 26			
Male	84.67	16.62	27
Female	94.59	13.74	29
26 and Older			
Male	89.43	18.75	14
Female	91.46	15.31	24

4. Tests of Significance

Source of Variation	Sum of Squares	df	Mean Square	F Value	Sig
Within Cells	22428.42	90	249.20		
Age	14.46	1	14.46	.06	.81
Gender	773.42	1	773.42	3.10	.08
Age by Gender	337.18	1	337.18	1.35	.25

$p < .05$

Thus, none of the F values were significant enough to reject the null hypothesis and therefore it was concluded that age, gender, and the interaction of age and gender, did not contribute to an increase in the quality of academic and scholarly efforts.

Independent variables:

Gender (male; female)

Enrollment status (full time; part time)

1. Factorial Design:

	Male		Female	
Full Time	I	n = 28	I	n = 26
	I		I	
Part Time	I	n = 13	I	n = 27
	I		I	

Total n = 94

2. Null Hypothesis

There are no differences among the independent variables of gender and enrollment status, as measured by the quality of academic and scholarly effort, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of QE1 by levels of gender and enrollment status:

Variable	Mean	Std Dev	Cases
For entire sample	90.17	16.02	94
Male			
Full Time	88.86	18.80	28
Part Time	80.77	12.38	13
Female			
Full Time	94.46	13.31	26
Part Time	91.93	15.56	27

4. Tests of Significance

Source of Variation	Sum of Squares	df	Mean Square	F Value	Sig
Within Cells	22100.05	90	245.56		
Gender	1493.25	1	1493.25	6.08	.02*
Enrollment	599.88	1	599.88	2.44	.12
Gender by Enroll	163.86	1	163.86	.67	.42

*p<.05

Thus, the only F value significant enough to reject the null hypothesis was gender and since the mean for female students (93.17) was greater than the mean for male students (86.29) it may be concluded that female students put forth more academic and scholarly effort, as measured by the CSEQ, than do male students.

Since each independent variable was measured twice, and since gender was only significant once, significance of the independent variable gender as measured by the quality of effort scales regarding academic and scholarly activities, should therefore be interpreted as somewhat inconclusive.

Statistical Tests for Quality of Effort Scales - 2

(Informal, Interpersonal Activities)

Independent variables:

Age (younger than 26; 26 or older)

Enrollment status (full time; part time)

1. Factorial Design:

	< 26		≥ 26	
Full Time	I	n = 34	I	n = 13
	I		I	I
Part Time	I	n = 16	I	n = 23
	I		I	I

Total n = 86

2. Null Hypothesis

There are no differences among the independent variables of age and enrollment status, as measured by the quality of effort scales regarding informal, interpersonal activities, than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of QE2 by levels of age and enrollment status:

Variable	Mean	Std Dev	Cases
For entire sample	91.24	21.21	86
Younger than 26			
Full Time	99.68	21.73	34
Part Time	91.75	20.04	16
26 and Older			
Full Time	87.77	17.19	13
Part Time	80.39	18.82	23

4. Tests of Significance

Source of Variation	Sum of Squares	df	Mean Square	F Value	Sig
Within Cells	32950.23	82	401.83		
Age	2549.55	1	2549.55	6.34	.01*
Enrollment	1103.20	1	1103.20	2.75	.10
Age by Enroll	1.42	1	1.42	.00	.95

* $p < .05$

Thus, the only F value that was significant enough to reject the null hypothesis was age and since the mean for students younger than 26 (97.14) was greater than for students 26 and older (83.06), it may be concluded that students younger than 26 put forth more effort towards informal and interpersonal activities, as measured by the CSEQ, than do students 26 and older.

Independent variables:

Age (younger than 26; 26 or older)

Gender (male; female)

1. Factorial Design:

	< 26	≥ 26
Male	n = 23	n = 13
Female	n = 27	n = 23
	Total n = 86	

2. Null Hypothesis

There are no differences among the independent variables of age and gender, as measured by the quality of effort scales regarding informal, interpersonal activities, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of QE2 by levels of age and gender:

Variable	Mean	Std Dev	Cases
For entire sample	91.24	21.21	86
Younger than 26			
Male	97.22	22.69	23
Female	97.07	20.54	27
26 and Older			
Male	83.77	21.57	13
Female	82.65	16.78	23

4. Tests of Significance

Source of Variation	Sum of Squares	df	Mean Square	F Value	Sig
Within Cells	34075.29	82	415.55		
Age	3865.98	1	3865.98	9.30	.00*
Gender	7.91	1	7.91	.02	.89
Age by Gender	4.72	1	4.72	.01	.92

* $p < .05$

Thus, the only F value that was significant enough to reject the null hypothesis was age and since the mean for students younger than 26 (97.14) was greater than for students 26 and older (83.06), it may be concluded that students younger than 26 put forth more effort towards informal and interpersonal activities, as measured by the CSEQ, than do students 26 and older.

Independent variables:

Gender (male; female)

Enrollment status (full time; part time)

1. Factorial Design:

	Male		Female	
Full Time	I	n = 24	I	n = 23
	I		I	
Part Time	I	n = 12	I	n = 27
	I		I	

Total n = 86

2. Null Hypothesis

There are no differences among the independent variables of gender and enrollment status, as measured by the quality of effort scales regarding informal, interpersonal activities, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of QE2 by levels of gender and enrollment status:

Variable	Mean	Std Dev	Cases
For entire sample	91.24	21.21	86
Male			
Full Time	98.63	23.15	24
Part Time	79.83	17.22	12
Female			
Full Time	94.04	18.94	23
Part Time	87.37	20.85	27

4. Tests of Significance

Source of Variation	Sum of Squares	df	Mean Square	F Value	Sig
Within Cells	34782.54	82	424.18		
Gender	42.50	1	42.50	.10	.75
Enrollment	3155.26	1	3155.26	7.44	.01*
Gender by Enroll	714.59	1	714.59	1.68	.20

* $p < .05$

Thus, the only F value significant enough to reject the null hypothesis was enrollment status, and since the mean for full-time students (96.38) was greater than the mean for part-time students (85.05), it may be concluded that full-time students put forth more effort towards informal and interpersonal activities, as measured by the CSEQ, than do part-time students.

Since each independent variable was measured twice, and since enrollment status was only statistically significant once, significance of the independent variable enrollment status as measured by the quality of effort scales regarding informal and interpersonal activities should therefore be interpreted as somewhat inconclusive.

Statistical Tests for Quality of Effort Scales - 3

(Group Facilities and Organized Activities)

Independent variables:

Age (younger than 26; 26 or older)

Enrollment status (full time; part time)

1. Factorial Design:

	< 26		≥ 26	
Full Time	I	n = 37	I	n = 14
Part Time	I	n = 15	I	n = 24

Total n = 90

2. Null Hypothesis

There are no differences among the independent variables of age and enrollment status, as measured by the quality of effort scales regarding group facilities and organized activities, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of QE3 by levels of age and enrollment status:

<u>Variable</u>	<u>Mean</u>	<u>Std Dev</u>	<u>Cases</u>
For entire sample	47.11	14.97	90
Younger than 26			
Full Time	53.73	16.49	37
Part Time	48.13	17.92	15
26 and Older			
Full Time	44.64	8.86	14
Part Time	37.71	5.93	24

4. Tests of Significance

Source of Variation	Sum of Squares	df	Mean Square	F Value	Sig
Within Cells	16113.20	86	187.36		
Age	1841.07	1	1841.07	9.83	.00*
Enrollment	759.34	1	759.34	4.05	.05*
Age by Enroll	8.66	1	8.66	.05	.83

* $p \leq .05$

Thus, the F value for both age and enrollment status were significant enough to reject the null hypothesis. Thus it may be concluded that since the mean for students younger than 26 (52.12) was greater than the mean for students 26 and older (40.26), that students younger than 26 put forth more effort toward group facilities and organized activities, as measured by the CSEQ, than do students 26 and older. Likewise, since the mean for full-time students (51.24) was greater than the mean for part-time students (41.72), it follows that full-time students put forth more effort toward group facilities and organized activities, as measured by the CSEQ, than do part-time students.

Independent variables:

Age (younger than 26; 26 or older)

Gender (male; female)

1. Factorial Design:

	< 26	≥ 26	
Male	I n = 23	I n = 14	I
Female	I n = 29	I n = 24	I
	I	I	I
Total n = 90			

2. Null Hypothesis

There are no differences among the independent variables of age and gender, as measured by the quality of effort scales regarding group facilities and organized activities, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of QE3 by levels of age and gender:

Variable	Mean	Std Dev	Cases
For entire sample	47.11	14.97	90
Younger than 26			
Male	51.13	14.25	23
Female	52.90	19.00	29
26 and Older			
Male	42.14	9.82	14
Female	39.17	6.34	24

4. Tests of Significance

Source of Variation	Sum of Squares	df	Mean Square	F Value	Sig
Within Cells	16754.35	86	194.82		
Age	2701.21	1	2701.21	13.87	.00*
Gender	7.66	1	7.66	.04	.84
Age by Gender	117.71	1	117.71	.60	.44

*p<.05

Thus, the only F value that was significant enough to reject the null hypothesis was age and since the mean for students younger than 26 (52.12) was greater than for students 26 and older (40.26), it may be concluded that students younger than 26 put forth more effort towards utilizing group facilities and participating in organized activities, as measured by the CSEQ, than do students who are 26 years of age or older.

Independent variables:

Gender (male; female)

Enrollment status (full time; part time)

1. Factorial Design:

	Male	Female
Full Time	I n = 24 I	I n = 27 I
Part Time	I n = 13 I	I n = 26 I

Total n = 90

2. Null Hypothesis

There are no differences among the independent variables of gender and enrollment status, as measured by the quality of effort scales regarding group facilities and organized activities, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of QE3 by levels of gender and enrollment status:

Variable	Mean	Std Dev	Cases
For entire sample	47.11	14.97	90
Male			
Full Time	51.63	12.53	24
Part Time	40.54	12.16	13
Female			
Full Time	50.89	17.57	27
Part Time	42.31	13.43	26

4. Tests of Significance

Source of Variation	Sum of Squares	df	Mean Square	F Value	Sig
Within Cells	17921.06	86	208.38		
Gender	5.50	1	5.50	.03	.87
Enrollment	1993.01	1	1993.01	9.56	.00*
Gender by Enroll	32.34	1	32.34	.16	.70

* $p < .05$

Thus, the only F value significant enough to reject the null hypothesis was enrollment, and since the mean for full-time students (51.24) was greater than the mean for part-time students (41.72), it may be concluded that full-time students put forth more effort towards utilizing group facilities and participating in organized activities, as measured by the CSEQ, than do part-time students.

Statistical Tests for Quality of Effort Scales - 4

(Science Activities)

Independent variables:

Age (younger than 26; 26 or older)

Enrollment status (full time; part time)

1. Factorial Design:

	< 26		≥ 26	
Full Time	I	n = 41	I	n = 14
	I		I	
Part Time	I	n = 17	I	n = 23
	I		I	

Total n = 95

2. Null Hypothesis

There are no differences among the independent variables of age and enrollment status, as measured by the quality of effort scales regarding science activities, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of QE4 by levels of age and enrollment status:

<u>Variable</u>	<u>Mean</u>	<u>Std Dev</u>	<u>Cases</u>
For entire sample	17.73	6.67	95
Younger than 26			
Full Time	18.46	6.09	41
Part Time	16.82	6.98	17
26 and Older			
Full Time	18.29	7.92	14
Part Time	16.74	6.89	23

4. Tests of Significance

Source of Variation	Sum of Squares	df	Mean Square	F Value	Sig
Within Cells	4121.96	91	45.30		
Age	.35	1	.35	.01	.93
Enrollment	51.25	1	51.25	1.13	.29
Age by Enroll	.04	1	.04	.00	.98

p < .05

Thus, none of the F values were significant enough to reject the null hypothesis, and therefore it was concluded that age, enrollment status, and the interaction of age and enrollment status, did not contribute to an increase in the quality effort regarding science activities.

Independent variables:

Age (younger than 26; 26 or older)

Gender (male; female)

1. Factorial Design:

	< 26		≥ 26	
Male	I	n = 29	I	n = 13
	I		I	
Female	I	n = 29	I	n = 24
	I		I	

Total n = 95

2. Null Hypothesis

There are no differences among the independent variables of age and gender, as measured by the quality of effort scales regarding science activities, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of QE4 by levels of age and gender:

Variable	Mean	Std Dev	Cases
For entire sample	17.73	6.67	95
Younger than 26			
Male	19.28	7.21	29
Female	16.69	5.15	29
26 and Older			
Male	21.39	8.21	13
Female	15.13	5.68	24

4. Tests of Significance

Source of Variation	Sum of Squares	df	Mean Square	F Value	Sig
Within Cells	3747.70	91	41.18		
Age	1.58	1	1.58	.04	.85
Gender	417.20	1	417.20	10.13	.00*
Age by Gender	71.95	1	71.95	1.75	.19

* $p < .05$

Thus, the only F value that was significant enough to reject the null hypothesis was gender and since the mean for the male students (19.93) was greater than the mean for the female students (15.98), it may be concluded that male students put forth more effort towards sciences

activities, as measured by the CSEQ, than do female students.

Independent variables:

Gender (male; female)

Enrollment status (full time; part time)

1. Factorial Design:

	Male	Female
Full Time	I n = 29 I	I n = 26 I
Part Time	I n = 13 I	I n = 27 I

Total n = 95

2. Null Hypothesis

There are no differences among the independent variables of gender and enrollment status, as measured by the quality of effort scales regarding science activities, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of QE4 by levels of gender and enrollment status:

Variable	Mean	Std Dev	Cases
For entire sample	17.73	6.67	95
Male			
Full Time	20.03	7.48	29
Part Time	19.69	7.84	13
Female			
Full Time	16.62	4.78	26
Part Time	15.37	5.96	27

4. Tests of Significance

Source of Variation	Sum of Squares	df	Mean Square	F Value	Sig
Within Cells	3798.18	91	41.74		
Gender	320.61	1	320.61	7.68	.01*
Enrollment	13.48	1	13.48	.32	.57
Gender by Enroll	4.36	1	4.36	.10	.75

* $p < .05$

Thus, the only F value significant enough to reject the null hypothesis was gender, and since the mean for male students (19.93) was greater than the mean for female students (15.98), it may be concluded that male students put forth more effort towards science activities, as measured by the CSEQ, than do female students.

Statistical tests for Environmental Ratings - 1
(Relationships)

Independent variables:

Age (younger than 26; 26 or older)

Enrollment status (full time; part time)

1. Factorial Design:

	< 26		≥ 26	
Full Time	I	n = 42	I	n = 14
	I		I	I
Part Time	I	n = 18	I	n = 24
	I		I	I

Total n = 98

2. Null Hypothesis

There are no differences among the independent variables of age and enrollment status, as measured by the relationship scales of the environmental ratings, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of E1 by levels of age and enrollment status:

Variable	Mean	Std Dev	Cases
For entire sample	14.85	3.512	98
Younger than 26			
Full Time	14.29	3.27	42
Part Time	14.78	4.37	18
26 and Older			
Full Time	14.79	2.81	14
Part Time	15.92	3.55	24

4. Tests of Significance

Source of Variation	Sum of Squares	df	Mean Square	F Value	Sig
Within Cells	1155.87	94	12.30		
Age	13.96	1	13.96	1.13	.29
Enrollment	13.69	1	13.69	1.11	.29
Age by Enroll	2.12	1	2.12	.17	.68

$p < .05$

Thus, none of the F values were significant enough to reject the null hypothesis, and therefore it was concluded that age, enrollment status, and the interaction of age and enrollment status, did not contribute to an increase in relationships.

Independent variables:

Age (younger than 26; 26 or older)

Gender (male; female)

1. Factorial Design:

	< 26		≥ 26	
Male	I	n = 29	I	n = 14
	I		I	
Female	I	n = 31	I	n = 24
	I		I	
Total n = 98				

2. Null Hypothesis

There are no differences among the independent variables of age and gender, as measured by the environmental scales regarding relationships, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of E1 by levels of age and gender:

Variable	Mean	Std Dev	Cases
For entire sample	14.85	3.51	98
Younger than 26			
Male	13.90	3.74	29
Female	14.94	3.46	31
26 and Older			
Male	14.36	3.84	14
Female	16.17	2.82	24

4. Tests of Significance

Source of Variation	Sum of Squares	df	Mean Square	F Value	Sig
Within Cells	1125.11	94	11.97		
Age	15.92	1	15.92	1.33	.25
Gender	45.12	1	45.12	3.77	.06
Age by Gender	3.30	1	3.30	.28	.60

p<.05

Thus, none of the F values were significant enough to reject the null hypothesis, and therefore it was concluded that age, gender, and the interaction of age and gender, did not contribute to an increase in relationships.

Independent variables:

Gender (male; female)

Enrollment status (full time; part time)

1. Factorial Design:

	Male		Female	
Full Time	I	n = 29	I	n = 27
	I		I	I
Part Time	I	n = 14	I	n = 28
	I		I	I

Total n = 98

2. Null Hypothesis

There are no differences among the independent variables of gender and enrollment status, as measured by the environmental scales regarding relationships, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of E1 by levels of gender and enrollment status:

<u>Variable</u>	<u>Mean</u>	<u>Std Dev</u>	<u>Cases</u>
For entire sample	14.85	3.51	98
Male			
Full Time	14.07	3.01	29
Part Time	14.00	5.04	14
Female			
Full Time	14.78	3.30	27
Part Time	16.14	3.08	28

4. Tests of Significance

<u>Source of Variation</u>	<u>Sum of Squares</u>	<u>df</u>	<u>Mean Square</u>	<u>F Value</u>	<u>Sig</u>
Within Cells	1121.96	94	11.94		
Gender	45.52	1	45.52	3.81	.05*
Enrollment	9.40	1	9.40	.79	.38
Gender by Enroll	11.51	1	11.51	.96	.33

*.054, $p > .05$

Thus, none of the F values were significant enough to reject the null hypothesis, and therefore it was concluded that gender, enrollment status, and the interaction of gender and enrollment status, did not contribute to an increase in relationships.

Statistical Tests for Environmental Ratings - 2

(Scholarly)

Independent variables:

Age (younger than 26; 26 or older)

Enrollment status (full time; part time)

1. Factorial Design:

	< 26		≥ 26	
Full Time	I	n = 42	I	n = 14
Part Time	I	n = 18	I	n = 24

Total n = 98

2. Null Hypothesis

There are no differences among the independent variables of age and enrollment status, as measured by ratings of a scholarly environment, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of E2 by levels of age and enrollment status:

Variable	Mean	Std Dev	Cases
For entire sample	15.02	3.07	98
Younger than 26			
Full Time	14.93	2.76	42
Part Time	14.33	4.13	18
26 and Older			
Full Time	15.21	3.17	14
Part Time	15.58	2.67	24

4. Tests of Significance

Source of Variation	Sum of Squares	df	Mean Square	F Value	Sig
Within Cells	896.98	94	9.54		
Age	12.25	1	12.25	1.28	.26
Enrollment	.27	1	.27	.03	.87
Age by Enroll	4.83	1	4.83	.51	.48

p < .05

Thus, none of the F values were significant enough to reject the null hypothesis, and therefore it was concluded that age, enrollment status, and the interaction of age and enrollment status, did not contribute to an increase in perceptions of a scholarly environment.

Independent variables:

Age (younger than 26; 26 or older)

Gender (male; female)

1. Factorial Design:

	< 26		≥ 26		
Male	I	n = 29	I	n = 14	I
	I		I		I
Female	I	n = 31	I	n = 24	I
	I		I		I
Total n = 98					

2. Null Hypothesis

There are no differences among the independent variables of age and gender, as measured by ratings of a scholarly environment, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of E2 by levels of age and gender:

<u>Variable</u>	<u>Mean</u>	<u>Std Dev</u>	<u>Cases</u>
For entire sample	15.02	3.07	98
Younger than 26			
Male	14.07	2.52	29
Female	15.39	3.67	31
26 and Older			
Male	15.21	2.72	14
Female	15.58	2.93	24

4. Tests of Significance

<u>Source of Variation</u>	<u>Sum of Squares</u>	<u>df</u>	<u>Mean Square</u>	<u>F Value</u>	<u>Sig</u>
Within Cells	875.41	94	9.31		
Age	10.01	1	10.01	1.07	.30
Gender	15.83	1	15.83	1.70	.20
Age by Gender	5.01	1	5.01	.54	.47

p<.05

Thus, none of the F values were significant enough to reject the null hypothesis, and therefore it was concluded that age, gender, and the interaction of age and gender, did not contribute to the perceptions of a scholarly environment.

Independent variables:

Gender (male; female)

Enrollment status (full time; part time)

1. Factorial Design:

	Male	Female
Full Time	I n = 29 I	I n = 27 I
Part Time	I n = 14 I	I n = 28 I

Total n = 98

2. Null Hypothesis

There are no differences among the independent variables of gender and enrollment status, as measured by ratings of a scholarly environment, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of E2 by levels of gender and enrollment status:

Variable	Mean	Std Dev	Cases
For entire sample	15.02	3.07	98
Male			
Full Time	14.31	2.30	29
Part Time	14.71	3.25	14
Female			
Full Time	15.74	3.21	27
Part Time	15.21	3.50	28

4. Tests of Significance

Source of Variation	Sum of Squares	df	Mean Square	F Value	Sig
Within Cells	882.96	94	9.39		
Gender	20.86	1	20.86	2.22	.14
Enrollment	.08	1	.08	.01	.93
Gender by Enroll	4.85	1	4.85	.52	.47

p < .05

Thus, none of the F values were significant enough to reject the null hypothesis, and therefore it was concluded that gender, enrollment status, and the interaction of gender and enrollment status, did not contribute to perceptions of a scholarly environment.

Statistical Tests for Environmental Ratings - 3

(Vocational)

Independent variables:

Age (younger than 26; 26 or older)

Enrollment status (full time; part time)

1. Factorial Design:

	< 26		≥ 26	
Full Time	I	n = 42	I	n = 14
	I		I	I
Part Time	I	n = 18	I	n = 24
	I		I	I

Total n = 98

2. Null Hypothesis

There are no differences among the independent variables of age and enrollment status, as measured by environmental ratings focused on placing an emphasis on the development of vocational and occupational competence, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of E3 by levels of age and enrollment status:

<u>Variable</u>	<u>Mean</u>	<u>Std Dev</u>	<u>Cases</u>
For entire sample	9.53	2.38	98
Younger than 26			
Full Time	9.05	2.42	42
Part Time	9.33	3.14	18
26 and Older			
Full Time	9.86	1.92	14
Part Time	10.33	1.69	24

4. Tests of Significance

<u>Source of Variation</u>	<u>Sum of Squares</u>	<u>df</u>	<u>Mean Square</u>	<u>F Value</u>	<u>Sig</u>
Within Cells	520.95	94	5.54		
Age	17.01	1	17.01	3.07	.08
Enrollment	3.02	1	3.02	.54	.46
Age by Enroll	.19	1	.19	.03	.85

$p < .05$

Thus, none of the F values were significant enough to reject the null hypothesis, and therefore it was concluded that age, enrollment status, and the interaction of age and enrollment status, did not contribute to an increase in perceptions of an environment which emphasizes the development of vocational occupational competence.

Independent variables:

Age (younger than 26; 26 or older)

Gender (male; female)

1. Factorial Design:

	< 26		≥ 26	
Male	I	n = 29	I	n = 14
	I		I	
Female	I	n = 31	I	n = 24
	I		I	

Total n = 98

2. Null Hypothesis

There are no differences among the independent variables of age and gender, as measured by the scales rating an environment which emphasizes the development of vocational and occupational competence, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of E3 by levels of age and gender:

Variable	Mean	Std Dev	Cases
For entire sample	9.53	2.38	98
Younger than 26			
Male	8.38	2.72	29
Female	9.84	2.38	31
26 and Older			
Male	9.93	1.86	14
Female	10.29	1.73	24

4. Tests of Significance

Source of Variation	Sum of Squares	df	Mean Square	F Value	Sig
Within Cells	490.91	94	5.22		
Age	22.29	1	22.29	4.27	.04*
Gender	18.47	1	18.47	3.54	.06
Age by Gender	6.68	1	6.68	1.28	.26

* $p < .05$

Thus, the only F value significant enough to reject the null hypothesis was age, and since the mean for students 26 and older (10.16) was greater than the mean for students younger than 26 (9.13), it may be concluded that students 26 years of age and older are more likely to perceive Christopher Newport University as an institution which stresses the development of vocational and occupational competence, as measured by the CSEQ, than are students younger than 26.

Independent variables:

Gender (male; female)

Enrollment status (full time; part time)

1. Factorial Design:

	Male		Female	
Full Time	I	n = 29	I	n = 27
	I		I	I
Part Time	I	n = 14	I	n = 28
	I		I	I

Total n = 98

2. Null Hypothesis

There are no differences among the independent variables of gender and enrollment status, as measured by the scales which rate the environment as one which emphasizes the development of vocational and occupational

competence, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of E3 by levels of gender and enrollment status:

Variable	Mean	Std Dev	Cases
For entire sample	9.53	2.38	98
Male			
Full Time	8.62	2.24	29
Part Time	9.43	3.13	14
Female			
Full Time	9.93	2.24	27
Part Time	10.14	2.03	28

4. Tests of Significance

Source of Variation	Sum of Squares	df	Mean Square	F Value	Sig
Within Cells	509.54	94	5.42		
Gender	22.83	1	22.83	4.21	.04*
Enrollment	5.88	1	5.88	1.08	.30
Gender by Enroll	1.95	1	1.95	.36	.55

* $p < .05$

Thus, the only F value significant enough to reject the null hypothesis was gender, and since the mean for female students (10.04) was greater than the mean for male students (8.88), it may be concluded that female students are more likely to perceive Christopher Newport University as an institution which stresses the development of

vocational and occupational competence, as measured by the CSEQ, than are male students.

Since each independent variable was measured twice, and since both age and gender were only statistically significant once, the significance of these two independent variables, as measured by the environmental ratings regarding the emphasis of the development of vocational and occupational competence, should be interpreted as somewhat inconclusive.

Statistical Tests for Estimates of Gains - 1

(Personal/Social)

Independent variables:

Age (younger than 26; 26 or older)

Enrollment status (full time; part time)

1. Factorial Design:

	< 26	≥ 26	
Full Time	I n = 42	I n = 14	I
Part Time	I n = 18	I n = 24	I

Total n = 98

2. Null Hypothesis

There are no differences among the independent variables of age and enrollment status, as measured by an

estimate of gains in developing personal/social competence, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of G1 by levels of age and enrollment status:

<u>Variable</u>	<u>Mean</u>	<u>Std Dev</u>	<u>Cases</u>
For entire sample	12.10	3.43	98
Younger than 26			
Full Time	12.55	3.05	42
Part Time	13.17	3.37	18
26 and Older			
Full Time	9.50	3.23	14
Part Time	12.04	3.65	24

4. Tests of Significance

<u>Source of Variation</u>	<u>Sum of Squares</u>	<u>df</u>	<u>Mean Square</u>	<u>F Value</u>	<u>Sig</u>
Within Cells	1017.36	94	10.82		
Age	90.46	1	90.46	8.36	.01*
Enrollment	51.91	1	51.91	4.80	.03*
Age by Enroll	19.21	1	19.21	1.77	.19

* $p < .05$

Thus, both of the F values pertaining to age and enrollment status were significant enough to reject the null hypothesis, and therefore since the mean for students younger than 26 (12.73) was greater than the mean for students 26 years of age or older (11.11), it may be concluded that students younger than 26 estimate greater gains in developing personal/social competence, as

measured by the CSEQ, than do students who are 26 years of age or older. Likewise, since the mean for part-time students (12.52) was greater than the mean for full-time students (11.79), it may further be concluded that part-time students estimate greater gains in developing personal/social competence, as measured by the CSEQ, than do full-time students.

Independent variables:

Age (younger than 26; 26 or older)

Gender (male; female)

1. Factorial Design:

	<u>< 26</u>	<u>≥ 26</u>	
Male	I n = 29 I	I n = 14 I	
Female	I n = 31 I	I n = 24 I	
Total n = 98			

2. Null Hypothesis

There are no differences among the independent variables of age and gender, as measured by the estimate of gains scales which emphasize the development of personal/social competence, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of G1 by levels of age and gender:

<u>Variable</u>	<u>Mean</u>	<u>Std Dev</u>	<u>Cases</u>
For entire sample	12.10	3.43	98
Younger than 26			
Male	12.28	2.95	29
Female	13.16	3.29	31
26 and Older			
Male	10.50	4.15	14
Female	11.46	3.41	24

4. Tests of Significance

<u>Source of Variation</u>	<u>Sum of Squares</u>	<u>df</u>	<u>Mean Square</u>	<u>F Value</u>	<u>Sig</u>
Within Cells	1059.44	94	11.27		
Age	67.30	1	67.30	5.97	.02*
Gender	18.90	1	18.90	1.68	.20
Age by Gender	.03	1	.03	.00	.96

* $p < .05$

Thus, the only F value significant enough to reject the null hypothesis was age and since the mean for students younger than 26 (12.73) was greater than the mean for students 26 years of age and older (11.11), it may be concluded that students younger than 26 estimate greater gains in developing personal/social competence, as measured by the CSEQ, than do students 26 years of age or older.

Independent variables:

Gender (male; female)

Enrollment status (full-time; part-time)

1. Factorial Design:

	Male		Female	
Full Time	I	n = 29	I	n = 27
	I		I	I
Part Time	I	n = 14	I	n = 28
	I		I	I

Total n = 98

2. Null Hypothesis

There are no differences among the independent variables of gender and enrollment status, as measured by the estimates of gains scales which emphasize the development of personal/social competence, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of G1 by levels of gender and enrollment status:

<u>Variable</u>	<u>Mean</u>	<u>Std Dev</u>	<u>Cases</u>
For entire sample	12.10	3.43	98
Male			
Full Time	11.62	3.50	29
Part Time	11.86	3.44	14
Female			
Full Time	11.96	3.23	27
Part Time	12.86	3.60	28

4. Tests of Significance

Source of Variation	Sum of Squares	df	Mean Square	F Value	Sig
Within Cells	1116.93	94	11.88		
Gender	10.08	1	10.08	.85	.36
Enrollment	7.15	1	7.15	.60	.44
Gender by Enroll	2.42	1	2.42	.20	.65

p<.05

Thus, none of the F values were significant enough to reject the null hypothesis, and therefore it was concluded that gender, enrollment status, and the interaction of gender and enrollment status, did not contribute to an increase in an estimate of gains for the development of personal/social competence.

Again, it should be noted that since enrollment status was only statistically significant once, as measured by the estimate of gains for the development of personal/social competence, its significance should be interpreted as inconclusive.

Statistical Tests for Estimates of Gains - 2

(Science and Technology)

Independent variables:

Age (younger than 26; 26 or older)

Enrollment status (full time; part time)

1. Factorial Design:

	< 26		≥ 26	
Full Time	I	n = 42	I	n = 14
	I		I	
Part Time	I	n = 18	I	n = 24
	I		I	

Total n = 98

2. Null Hypothesis

There are no differences among the independent variables of age and enrollment status, as measured by an estimate of gains in developing competence in the areas of science and technology, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of G2 by levels of age and enrollment status:

Variable	Mean	Std Dev	Cases
For entire sample	6.40	2.46	98
Younger than 26			
Full Time	6.64	2.42	42
Part Time	6.56	2.77	18
26 and Older			
Full Time	6.29	3.05	14
Part Time	5.92	1.96	24

4. Tests of Significance

Source of Variation	Sum of Squares	df	Mean Square	F Value	Sig
Within Cells	578.78	94	6.16		
Age	5.15	1	5.15	.84	.36
Enrollment	1.08	1	1.08	.18	.68
Age by Enroll	.41	1	.41	.07	.80

p < .05

Thus, none of the F values were significant enough to reject the null hypothesis, and therefore it was concluded that age, enrollment status, and the interaction of age and enrollment status, did not contribute to an increase in perceptions of gains in science and technology.

Independent variables:

Age (younger than 26; 26 or older)

Gender (male; female)

1. Factorial Design:

	< 26		≥ 26	
Male	I	n = 29	I	n = 14
	I		I	I
Female	I	n = 31	I	n = 24
	I		I	I

Total n = 98

2. Null Hypothesis

There are no differences among the independent variables of age and gender, as measured by the estimate of gains scales which emphasize the development of

competence in science and technology, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of G2 by levels of age and gender:

<u>Variable</u>	<u>Mean</u>	<u>Std Dev</u>	<u>Cases</u>
For entire sample	6.40	2.46	98
Younger than 26			
Male	6.59	2.72	29
Female	6.65	2.33	31
26 and Older			
Male	6.57	2.41	14
Female	5.75	2.36	24

4. Tests of Significance

<u>Source of Variation</u>	<u>Sum of Squares</u>	<u>df</u>	<u>Mean Square</u>	<u>F Value</u>	<u>Sig</u>
Within Cells	574.06	94	6.11		
Age	4.60	1	4.60	.75	.39
Gender	3.23	1	3.23	.53	.47
Age by Gender	4.31	1	4.31	.71	.40

$p < .05$

Thus, none of the F values were significant enough to reject the null hypothesis, and therefore it was concluded that age, gender, and the interaction of age and gender, did not contribute to an increase in perceptions of gains in science and technology.

Independent variables:

Gender (male; female)

Enrollment status (full time; part time)

1. Factorial Design:

	Male	Female
Full Time	I n = 29 I	I n = 27 I
Part Time	I n = 14 I	I n = 28 I

Total n = 98

2. Null Hypothesis

There are no differences among the independent variables of gender and enrollment status, as measured by the estimates of gains scales which emphasize the development of competence in science and technology, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of G2 by levels of gender and enrollment status:

<u>Variable</u>	<u>Mean</u>	<u>Std Dev</u>	<u>Cases</u>
For entire sample	6.40	2.461	98
Male			
Full Time	6.55	2.69	29
Part Time	6.64	2.47	14
Female			
Full Time	6.56	2.47	27
Part Time	5.96	2.27	28

4. Tests of Significance

Source of Variation	Sum of Squares	df	Mean Square	F Value	Sig
Within Cells	580.02	94	6.17		
Gender	2.55	1	2.55	.41	.52
Enrollment	1.40	1	1.40	.23	.64
Gender by Enroll	2.61	1	2.61	.42	.52

p<.05

Thus, none of the F values were significant enough to reject the null hypothesis, and therefore it was concluded that gender, enrollment status, and the interaction of gender and enrollment status, did not contribute to an increase in gains in science and technology.

Statistical Tests for Estimates of Gains - 3

(General Education, Literature and the Arts)

Independent variables:

Age (younger than 26; 26 or older)

Enrollment status (full time; part time)

1. Factorial Design:

	< 26		≥ 26	
Full Time	I	n = 41	I	n = 14
	I		I	I
Part Time	I	n = 18	I	n = 24
	I		I	I

Total n = 97

2. Null Hypothesis

There are no differences among the independent variables of age and enrollment status, as measured by an estimate of gains in developing competence in the areas of general education, literature and the arts, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of G3 by levels of age and enrollment status:

Variable	Mean	Std Dev	Cases
For entire sample	12.05	2.96	97
Younger than 26			
Full Time	11.76	3.06	41
Part Time	12.67	3.05	18
26 and Older			
Full Time	12.43	2.71	14
Part Time	11.88	2.94	24

4. Tests of Significance

Source of Variation	Sum of Squares	df	Mean Square	F Value	Sig
Within Cells	825.61	93	8.88		
Age	.07	1	.07	.01	.93
Enrollment	.66	1	.66	.07	.79
Age by Enroll	11.10	1	11.10	1.25	.27

$p < .05$

Thus, none of the F values were significant enough to reject the null hypothesis, and therefore it was concluded that age, enrollment status, and the interaction of age

and enrollment status, did not contribute to an increase in perceptions of gains in general education, literature and the arts.

Independent variables:

Age (younger than 26; 26 or older)

Gender (male; female)

1. Factorial Design:

	<u>< 26</u>	<u>≥ 26</u>	
Male	I n = 29	I n = 14	I
	I	I	I
Female	I n = 30	I n = 24	I
	I	I	I

Total n = 97

2. Null Hypothesis

There are no differences among the independent variables of age and gender, as measured by the estimate of gains scales which emphasize the development of competence in general education, literature and the arts, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of G3 by levels of age and gender:

Variable	Mean	Std Dev	Cases
For entire sample	12.05	2.96	97
Younger than 26			
Male	11.41	3.40	29
Female	12.63	2.61	30
26 and Older			
Male	11.07	2.37	14
Female	12.67	2.96	24

4. Tests of Significance

Source of Variation	Sum of Squares	df	Mean Square	F Value	Sig
Within Cells	794.26	93	8.54		
Age	.53	1	.53	.06	.80
Gender	43.79	1	43.79	5.13	.03*
Age by Gender	.78	1	.78	.09	.76

* $p < .05$

Thus, the only F value significant enough to reject the null hypothesis was gender, and since the mean for female students (12.65) was greater than the mean for male students (11.30), it may be concluded that female students estimate a greater gain in the development of competence in general education, literature and the arts, as measured by the CSEQ, than do male students.

Independent variables:

Gender (male; female)

Enrollment status (full time; part time)

1. Factorial Design:

	Male	Female
Full Time	I n = 29 I	I n = 26 I
Part Time	I n = 14 I	I n = 28 I

Total n = 97

2. Null Hypothesis

There are no differences among the independent variables of gender and enrollment status, as measured by the estimates of gains scales which emphasize the development of competence in general education, literature and the arts, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of G3 by levels of gender and enrollment status:

Variable	Mean	Std Dev	Cases
For entire sample	12.05	2.96	97
Male			
Full Time	11.35	3.02	29
Part Time	11.21	3.31	14
Female			
Full Time	12.58	2.82	26
Part Time	12.71	2.72	28

4. Tests of Significance

Source of Variation	Sum of Squares	df	Mean Square	F Value	Sig
Within Cells	794.97	93	8.55		
Gender	41.45	1	41.45	4.85	.03*
Enrollment	.00	1	.00	.00	1.00
Gender by Enroll	.40	1	.40	.05	.83

* $p < .05$

Thus, the only F value significant enough to reject the null hypothesis was gender, and since the mean for female students (12.65) was greater than the mean for male students (11.30), it may be concluded that female students estimate a greater gain in the development of competence in general education, literature and the arts, as measured by the CSEQ, than do male students.

Statistical Tests for Estimates of Gains - 4

(Intellectual Skills)

Independent variables:

Age (younger than 26; 26 or older)

Enrollment status (full time; part time)

1. Factorial Design:

	<u>< 26</u>	<u>≥ 26</u>	
Full Time	I n = 42	I n = 14	I
Part Time	I n = 17	I n = 23	I

Total n = 96

2. Null Hypothesis

There are no differences among the independent variables of age and enrollment status, as measured by an estimate of gains in developing intellectual skills, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of G4 by levels of age and enrollment status:

<u>Variable</u>	<u>Mean</u>	<u>Std Dev</u>	<u>Cases</u>
For entire sample	10.83	2.57	96
Younger than 26			
Full Time	11.29	2.60	42
Part Time	10.53	2.65	17
26 and Older			
Full Time	10.43	2.28	14
Part Time	10.48	2.68	23

4. Tests of Significance

<u>Source of Variation</u>	<u>Sum of Squares</u>	<u>df</u>	<u>Mean Square</u>	<u>F Value</u>	<u>Sig</u>
Within Cells	613.97	92	6.67		
Age	4.18	1	4.18	.63	.43
Enrollment	2.53	1	2.53	.38	.54
Age by Enroll	3.29	1	3.29	.49	.48

p<.05

Thus, none of the F values were significant enough to reject the null hypothesis, and therefore it was concluded that age, enrollment status, and the interaction of age and enrollment status, did not contribute to an increase in perceptions of gains in intellectual skills.

Independent variables:

Age (younger than 26; 26 or older)

Gender (male; female)

1. Factorial Design:

	< 26	≥ 26	
Male	I n = 29	I n = 14	I
	I	I	I
Female	I n = 30	I n = 23	I
	I	I	I

Total n = 96

2. Null Hypothesis

There are no differences among the independent variables of age and gender, as measured by the estimate of gains scales which emphasize the development of intellectual skills, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of G4 by levels of age and gender:

Variable	Mean	Std Dev	Cases
For entire sample	10.83	2.57	96
Younger than 26			
Male	10.79	2.94	29
Female	11.33	2.26	30
26 and Older			
Male	10.00	2.35	14
Female	10.74	2.60	23

4. Tests of Significance

Source of Variation	Sum of Squares	df	Mean Square	F Value	Sig
Within Cells	611.86	92	6.65		
Age	10.53	1	10.53	1.58	.21
Gender	8.96	1	8.96	1.35	.25
Age by Gender	.22	1	.22	.03	.86

$p < .05$

Thus, none of the F values were significant enough to reject the null hypothesis, and therefore it was concluded that age, gender, and the interaction of age and gender, did not contribute to an increase in perceptions of gains in intellectual skills.

Independent variables:

Gender (male; female)

Enrollment status (full time; part time)

1. Factorial Design:

	Male		Female		
Full Time	I	n = 29	I	n = 27	I
	I		I		I
Part Time	I	n = 14	I	n = 26	I
	I		I		I

Total n = 96

2. Null Hypothesis

There are no differences among the independent variables of gender and enrollment status, as measured by the estimates of gains scales which emphasize the development of competence in intellectual skills, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of G4 by levels of gender and enrollment status:

Variable	Mean	Std Dev	Cases
For entire sample	10.83	2.57	96
Male			
Full Time	10.66	2.81	29
Part Time	10.29	2.76	14
Female			
Full Time	11.52	2.16	27
Part Time	10.62	2.61	26

4. Tests of Significance

Source of Variation	Sum of Squares	df	Mean Square	F Value	Sig
Within Cells	610.30	92	6.63		
Gender	7.85	1	7.85	1.18	.28
Enrollment	8.93	1	8.93	1.35	.25
Gender by Enroll	1.57	1	1.57	.24	.63

$p < .05$

Thus, none of the F values were significant enough to reject the null hypothesis, and therefore it was concluded that gender, enrollment status, and the interaction of gender and enrollment status, did not contribute to an increase in perceptions of gains in intellectual skills.

Statistical Tests for Estimates of Gains - 5

(Vocational Preparation)

Independent variables:

Age (younger than 26; 26 or older)

Enrollment status (full time; part time)

1. Factorial Design:

	< 26		≥ 26	
Full Time	I	n = 42	I	n = 14
	I		I	I
Part Time	I	n = 18	I	n = 24
	I		I	I

Total n = 98

2. Null Hypothesis

There are no differences among the independent variables of age and enrollment status, as measured by an estimate of gains in vocational preparation, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of G5 by levels of age and enrollment status:

Variable	Mean	Std Dev	Cases
For entire sample	8.06	1.91	98
Younger than 26			
Full Time	7.91	1.92	42
Part Time	7.67	1.94	18
26 and Older			
Full Time	8.43	1.95	14
Part Time	8.42	1.86	24

4. Tests of Significance

Source of Variation	Sum of Squares	df	Mean Square	F Value	Sig
Within Cells	344.88	94	3.67		
Age	8.43	1	8.43	2.30	.13
Enrollment	.32	1	.32	.09	.77
Age by Enroll	.27	1	.27	.07	.79

p < .05

Thus, none of the F values were significant enough to reject the null hypothesis, and therefore it was concluded that age, enrollment status, and the interaction of age and enrollment status, did not contribute to an increase in perceptions of gains in vocational preparation.

Independent variables:

Age (younger than 26; 26 or older)

Gender (male; female)

1. Factorial Design:

	< 26	≥ 26
Male	I n = 29	I n = 14
Female	I n = 31	I n = 24
	I	I
	Total n = 98	

2. Null Hypothesis

There are no differences among the independent variables of age and gender, as measured by the estimate of gains scales which emphasize vocational preparation, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of G5 by levels of age and gender:

<u>Variable</u>	<u>Mean</u>	<u>Std Dev</u>	<u>Cases</u>
For entire sample	8.06	1.91	98
Younger than 26			
Male	7.62	2.15	29
Female	8.03	1.68	31
26 and Older			
Male	7.79	1.76	14
Female	8.79	1.87	24

4. Tests of Significance

<u>Source of Variation</u>	<u>Sum of Squares</u>	<u>df</u>	<u>Mean Square</u>	<u>F Value</u>	<u>Sig</u>
Within Cells	334.11	94	3.55		
Age	4.75	1	4.75	1.34	.25
Gender	11.17	1	11.17	3.14	.08
Age by Gender	1.96	1	1.96	.55	.46

p<.05

Thus, none of the F values were significant enough to reject the null hypothesis, and therefore it was concluded that age, gender, and the interaction of age and gender, did not contribute to an increase in perceptions of gains in vocational preparation.

Independent variables:

Gender (male; female)

Enrollment status (full time; part time)

1. Factorial Design:

	Male		Female	
Full Time	I	n = 29	I	n = 27
	I		I	
Part Time	I	n = 14	I	n = 28
	I		I	

Total n = 98

2. Null Hypothesis

There are no differences among the independent variables of gender and enrollment status, as measured by the estimates of gains scales which emphasize vocational preparation, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of G5 by levels of gender and enrollment status:

Variable	Mean	Std Dev	Cases
For entire sample	8.06	1.91	98
Male			
Full Time	7.76	2.05	29
Part Time	7.50	1.99	14
Female			
Full Time	8.33	1.78	27
Part Time	8.39	1.83	28

4. Tests of Significance

Source of Variation	Sum of Squares	df	Mean Square	F Value	Sig
Within Cells	341.49	94	3.63		
Gender	12.05	1	12.05	3.32	.07
Enrollment	.22	1	.22	.06	.81
Gender by Enroll	.57	1	.57	.16	.69

p<.05

Thus, none of the F values were significant enough to reject the null hypothesis, and therefore it was concluded that gender, enrollment status, and the interaction of gender and enrollment status, did not contribute to an increase in perceptions of gains in vocational preparation.

Statistical Tests for Grade Point Averages

Independent variables:

Age (younger than 26; 26 or older)

Enrollment status (full time; part time)

1. Factorial Design:

	< 26		≥ 26	
Full Time	I	n = 42	I	n = 14
	I		I	I
Part Time	I	n = 18	I	n = 24
	I		I	I

Total n = 98

2. Null Hypothesis

There are no differences among the independent variables of age and enrollment status, as measured by grade point averages, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of GPA by levels of age and enrollment status:

Variable	Mean	Std Dev	Cases
For entire sample	2.76	.55	98
Younger than 26			
Full Time	2.72	.53	42
Part Time	2.45	.51	18
26 and Older			
Full Time	3.05	.53	14
Part Time	2.89	.54	24

4. Tests of Significance

Source of Variation	Sum of Squares	df	Mean Square	F Value	Sig
Within Cells	26.12	94	.28		
Age	3.06	1	3.06	11.02	.00*
Enrollment	.94	1	.94	3.37	.07
Age by Enroll	.06	1	.06	.23	.63

* $p < .05$

Thus, the only F value significant enough to reject the null hypothesis was age, and since the mean for students 26 years of age and older (2.95) was greater than the mean for students younger than 26 (2.64), it may be concluded

that students 26 year of age and older have higher grade point averages than do students younger than 26.

Independent variables:

Age (younger than 26; 26 or older)

Gender (male; female)

1. Factorial Design:

	<u>< 26</u>	<u>≥ 26</u>	
Male	I n = 29	I n = 14	I
	I	I	I
Female	I n = 31	I n = 24	I
	I	I	I
Total n = 98			

2. Null Hypothesis

There are no differences among the independent variables of age and gender, as measured by grade point average, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of GPA by levels of age and gender:

Variable	Mean	Std Dev	Cases
For entire sample	2.76	.55	98
Younger than 26			
Male	2.62	.58	29
Female	2.66	.50	31
26 and Older			
Male	2.87	.59	14
Female	3.00	.50	24

4. Tests of Significance

Source of Variation	Sum of Squares	df	Mean Square	F Value	Sig
Within Cells	27.08	94	.29		
Age	1.92	1	1.92	6.65	.01*
Gender	.15	1	.15	.50	.48
Age by Gender	.05	1	.05	.16	.69

*p<.05

Thus, the only F value significant enough to reject the null hypothesis was age, and since the mean for students 26 years of age and older (2.95) is greater than the mean for students younger than 26 (2.64), it may be concluded that students 26 years of age and older have higher grade point averages than do students younger than 26.

Independent variables:

Gender (male; female)

Enrollment status (full time; part time)

1. Factorial Design:

	Male	Female
Full Time	I n = 29 I	I n = 27 I
Part Time	I n = 14 I	I n = 28 I
	Total n = 98	

2. Null Hypothesis

There are no differences among the independent variables of gender and enrollment status, as measured by

grade point averages, other than would be expected from sampling error alone.

$$H_0: M_1 = M_2 = M_3 = M_4$$

3. Summaries of GPA by levels of gender and enrollment status:

Variable	Mean	Std Dev	Cases
For entire sample	2.80	.55	98
Male			
Full Time	2.76	.62	29
Part Time	2.58	.51	14
Female			
Full Time	2.85	.45	27
Part Time	2.77	.59	28

4. Tests of Significance

Source of Variation	Sum of Squares	df	Mean Square	F Value	Sig
Within Cells	28.82	94	.31		
Gender	.41	1	.41	1.33	.25
Enrollment	.39	1	.39	1.26	.27
Gender by Enroll	.06	1	.06	.19	.66

$p < .05$

Thus, none of the F values were significant enough to reject the null hypothesis, and therefore it was concluded that gender, enrollment status, and the interaction of gender and enrollment status, did not contribute to an increase in grade point averages.

Table 27
Summary of Significant Findings

Variables	Statistic	Observed Significance Level
High Quality of Effort & Younger than 26.....	Pearson Chi-Square.....	.04
High Quality of Effort & Full Time Enrollment.....	Pearson Chi-Square.....	.01
CNU vs. CCU* on QE**: Faculty.....	T-Test [t(6503)=-3.16] ...	.05
CNU vs. CCU on QE: Course Learning.....	T-Test [t(6504)=-2.73] ...	.05
CNU vs. CCU on QE: Art, Music, Theatre.....	T-Test [t(6498)=-3.92] ...	.05
CNU vs. CCU on QE: Student Union.....	T-Test [t(6502)=-5.89] ...	.05
CNU vs. CCU on QE: Athletic & Recreation....	T-Test [t(6502)=-4.99] ...	.05
CNU vs. CCU on QE: Clubs & Organizations....	T-Test [t(6502)=-4.46] ...	.05
CNU vs. CCU on QE: Writing.....	T-Test [t(6505)=-2.12] ...	.05
CNU vs. CCU on QE: Personal.....	T-Test [t(6504)=-6.10] ...	.05
CNU vs. CCU on QE: Student Acquaintances....	T-Test [t(6504)=-4.72] ...	.05
CNU vs. CCU on QE: Science.....	T-Test [t(6502)= 4.29] ...	.05
CNU vs. CCU on QE: Topics/Conversation.....	T-Test [t(6501)=-13.02] ..	.05
CNU vs. CCU on QE: Information/Conversation..	T-Test [t(6505)=-3.97] ...	.05
CNU vs. CCU on Relationships w/ students....	T-Test [t(6505)=-3.15] ...	.05

GPA and Self-Estimated Gains in Personal/Social Development.....	Pearson Correlation.....	.02
Gender (Female) QE: Academic & Scholarly Activities.....	MANOVA.....	.02****
Age (Younger than 26) & QE: Informal, Interpersonal Activities.....	MANOVA.....	.01/.00
Enrollment (Full Time) & QE: Informal, Interpersonal Activities.....	MANOVA.....	.01****
Age (Younger than 26) & QE: Group Facilities and Organized Activities.....	MANOVA.....	.00/.00
Enrollment (Full Time) & QE: Group Facilities and Organized Activities.....	MANOVA.....	.05/.00
Gender (Male) & QE: Science Activities.....	MANOVA.....	.00/.01
Age (26 and Older) & ER***: Vocational.....	MANOVA.....	.04****
Gender (Female) ER: Vocational.....	MANOVA.....	.04****
Age (Younger than 26) & Gains: Personal/Social.....	MANOVA.....	.01/.02
Enrollment (Part Time) & Gains: Personal Social.....	MANOVA.....	.03****
Gender (Female) & Gains: General Education, Literature & the Arts.....	MANOVA.....	.03/.03
Age (26 and Older) & GPA.....	MANOVA.....	.00/.01

* QE = Quality of Effort

**CCU = Comprehensive Colleges and Universities

***ER = Environmental Ratings

**** each relationship between the two variables were measured twice, however this relationship was only statistically significant once and therefore its significance should be interpreted as inconclusive.

CHAPTER 5

QUALITATIVE ANALYSIS OF RESULTS

In this chapter data analysis from the qualitative design is presented. The chapter begins with a brief description of the participants and proceeds to an examination of research questions and hypotheses. Each research question or hypothesis is presented, followed by a description of the analysis procedure and then by the findings. Interpretations and explanations of the findings are discussed in Chapter Six.

The Participants

As indicated by the review of the literature, the concept of the involved and the not-so-involved college student often leads one to quickly envision stereotypical images and make assumptions. Since this chapter further investigates the concept of college student involvement through the presentation of qualitative data, it begins by challenging those images and assumptions through a brief description of the ten students who participated in the qualitative component of this study. Such a description is presented below.

Since the students were invited to participate in this phase of the research based on their quality of effort scores, some information regarding the range of those scores is helpful. The highest score possible was 512, while the lowest score possible was 128. As indicated in Chapter 4, based on the distribution, high quality of effort was defined as any score greater than 269, while low quality of effort was defined as any score less than 222. These scores were based on a mean of 245.73. To place these scores in a broader context, note that the sum of the means of the quality of effort scales for the normative data for comprehensive colleges and universities was 278.30.

To maintain anonymity while simultaneously personalizing the data, each student was assigned a fictitious first name. The portraits below clearly illustrate that the students who by Pace's CSEQ instrument were classified as highly involved and not very involved in the college experience are diverse both within the two involvement groups as well as overall.

The High Involved Group

1. **Todd.** Todd had a CSEQ quality of effort score of 370; well above the mean for both Christopher Newport University students and the normative data on

comprehensive colleges and universities. Todd is a white 29 year old married male. He does not have any children. He is a full-time student majoring in biology and has a 2.80 GPA. He is not employed during the school year. Todd commutes to Christopher Newport University from Norfolk which is about a forty minute drive one way, depending upon traffic. He has the longest commute of all the students interviewed. Neither of his parents graduated from college, however his current wife has a Master's degree in education. She has encouraged and supported his education, whereas his first wife dissuaded him from attending college. Todd plans on continuing his education after graduating from Christopher Newport, aspiring to be a research biologist and future Noble Prize winner.

2. **Rose.** Rose had a CSEQ quality of effort score of 368. Again this score is well above the mean for both Christopher Newport University students and the normative data. Rose is an international student from Mexico. She is 22 years old, attends Christopher Newport University full time and is majoring in International Culture and Commerce. She has a 2.98 GPA. During the school year Rose is employed both on campus (as a student office assistant in the division of International Studies) and off campus (as a bank teller). She lives within walking distance of both the University and her two jobs. She rents a small house from the University's Educational Foundation with

four other women. Rose has the shortest commute of all the students interviewed. Both of her parents graduated from college. Rose has struggled with becoming independent and balancing that sense of independence between the Mexican culture and the American culture. She plans on continuing her education after graduating from Christopher Newport, aspiring to successfully blend international travel with a career in business.

3. **Cindy.** Like Rose, Cindy had a CSEQ quality of effort score of 368. She is a white 21 year old female. She lives at home with her parents in Hampton - about a forty minute commute. She is a full-time student majoring in psychology and has a 2.77 GPA. She is not employed during the school year. Her father graduated from college, however she had very little contact with him and felt as if she were on her own in understanding the world of higher education. Cindy fits Horowitz's (1988) description of "College Women" in that she has been very active in the traditional forms of campus life (e.g., sorority president and homecoming queen). Cindy plans on continuing her education after graduating from Christopher Newport. Since she doesn't know what she wants to aspire to, she has spent the semester seeking assistance from the Office of Career Services.

4. **Ernest.** Ernest had a CSEQ quality of effort score of 329. Ernest is a black 20 year old male. He is a full-

time student majoring in management and marketing and has a 1.84 GPA. He has his own part-time business repairing cars. Ernest lives at home with his parents in Newport News. His dad has an Associates Degree. Ernest would like to own a business someday. During the data collection period, Ernest was in the process of pledging a predominantly white fraternity. He was involved in a couple of fights and was accused by a different predominantly white fraternity of being a member of an off-campus gang. He seems to be struggling with identity issues, and like Rose, may be feeling like what sociologists have termed the "marginal man".

5. **Ann.** Ann had a CSEQ quality of effort score of 319. Ann is a white 23 year old married female. She does not have children. She is a part-time student and has a 2.0 GPA. Ann has decided to major in physical education after experimenting with a psychology and then a theatre major. She has been attending Christopher Newport since 1987 (six years). She is employed on-campus as a student manager of The Terrace (pizzeria and bar) during the school year. She commutes to Christopher Newport University from Hampton. Both of her parents graduated from college. Ann aspires to be a gym teacher at the high school level.

The Low Involved Group

1. **Mary.** Mary had a CSEQ quality of effort score of 175. Mary is a white 49 year old married female. Her children are grown. She is a part-time student and has a 3.63 GPA. Mary has taken mostly distribution courses and is now beginning to contemplate a major. She is not employed during the school year. Neither her parents or husband graduated from college, however all of her children have, as have her sister and brother. Her husband neither supports nor discourages her education. Mary decided to go to college because it was something she always wanted to do but has not set any long term goals as far as using her education.

2. **Stewart.** Stewart had a CSEQ quality of effort score of 181. He is a white 24 year old male. He is engaged to be married and one of his professors will be a groomsman in his wedding. He met his fiancee in dance class at Christopher Newport. He is a part-time student majoring in music and has a 2.76 GPA. He is employed off-campus during the school year. Stewart commutes to Christopher Newport University from Poquoson. Neither of his parents graduated from college. Stewart has been in about 15 CNU theatre productions. Stewart aspires to be a music teacher at the middle school level.

3. **William.** William had a CSEQ quality of effort score of 186. He is a black 20 year old single male. He is

a full-time student majoring in information science and has a 2.99 GPA. He works part-time at a retirement home. William commutes to Christopher Newport University from Williamsburg, where he lives with his parents. He describes himself as bashful and introverted. His father is the pastor of a local church. The church and music are very important elements of his life. Neither of his parents graduated from college. William does not know exactly what he would like to do after he graduates, except that he would like a job working with computers.

4. **Arlene.** Arlene had a CSEQ quality of effort score of 188. She is a white 31 year old married female. She does not have any children. She is a full-time student majoring in accounting and has a 3.67 GPA. She is not employed during the school year. Neither of her parents graduated from college. Her husband, however, has graduated from college and is currently pursuing a MBA. Arlene has plans to take the CPA exam and is looking forward to obtaining a position in the accounting field.

5. **Ted.** Ted had a CSEQ quality of effort score of 188. He is a white 20 year old male. He got married last October. He took time off from classes the day of the rehearsal, was married on Saturday and back in classes on Monday. He is a full-time student and works off-campus 38-42 hours a week as an accounting clerk. Ted is also majoring in Accounting and has a 3.51 GPA. Neither his

wife nor his parents graduated from college. He would like to become a CPA, retire young and then begin a second career as a college professor. Ted has plans to earn a Master's degree.

Qualitative Results

Research Question 1

What is the nature of college student involvement on a computer campus?

Procedure for analysis: Before examining the data, categories were developed for the purpose of organizing the data. The coding scheme for identifying categories was developed by first examining the categories used by Kuh, Schuh, Whitt & Associates (1991) in their study of how colleges and universities foster student learning and development outside the classroom. The categories these researchers developed for within-site analysis were as follows:

1. the role of institutional agents regarding out-of-class experiences
2. description and role of student subcultures
3. description and role of institutional history and traditions
4. description and role of institutional policies and practices

5. description and role of institutional mission
6. characteristics of student involvement in out-of-class life
7. tentative explanations, speculations, and hypotheses
8. other (creating additional categories as necessary)

This coding scheme provided a good foundation for examining this first research question, but was not comprehensive enough. Thus a chart was created to examine the various concepts explored in this study. The first column (labeled concepts) consisted of the involvement variables contained within the CSEQ. The second column was called Pace and a check mark was placed in the box corresponding to the concepts the CSEQ explored. This first list (concepts) was expanded by also noting the variables contained within Astin's taxonomy of student outcomes (1970) and his 1993 publication, What Matters in College?, that were not examined by Pace. The third column (labeled Astin) consisted of check marks indicating which of Pace's variables were also examined by Astin, and which were examined by Astin but not Pace. Finally, the first list (concepts) was expanded a third time to add any other variables not already on the list that were examined in this study as posed by the interview questions. Thus, a

final column was added (labeled Mason) and again check marks were placed on the chart to indicate if the variable was examined by Pace and or Astin, as well as Mason. This chart was then compared to the categories used by Kuh, Schuh, Whitt and Associates (1991). The comparison resulted in the following 15 categories:

1. description and use of college facilities
2. experiences with faculty
3. description and role of student subcultures
4. description of intellectual development
5. description of self-understanding
6. description of and involvement with peer group
7. definitions and characteristics of student involvement in out-of-class life
8. description of the commuter experience
9. description and role of career development
10. experiences with administrative personnel and offices
11. description of levels of satisfaction with the college environment
12. description and role of institutional history
13. description and role of institutional policies and practices
14. role of family and friends
15. other

Utilizing these categories, the interview transcripts were read and divided into units of information. Those units were then coded accordingly. After the initial sorting into categories, the following modifications were made:

* Category 3 (description and role of student subcultures) was expanded to include a definition of subculture to aid the coders. That definition was as follows: a group that shares in the overall culture of a society but also has its own distinct values, norms and lifestyle (Robertson, 1977).

* Category 4 (description of intellectual development) was expanded to description of academic experience and intellectual development.

* Category 13 (description and role of institutional policies and practices) was eliminated.

The researcher then coded each unit according to the above categorization. The units were then given to a colleague who, without other information other than the categories as described above, independently sorted the data. Based on those two sorts, a rater reliability coefficient of .71 was calculated. Again, the units were given to a second colleague who independently sorted the data. Based on all three sorts a rater reliability coefficient of .59 was calculated.

The data were then sorted into the following four piles:

1. Agreement between sorter 1 and sorter 2 (69%), but not sorter 3 (31%)
2. Agreement between sorter 1 and sorter 3 (80%), but not sorter 2 (20%)
3. Agreement between sorter 2 and sorter 3 (84%), but not sorter 1 (16%)
4. Disagreement among all three sorters (34%)

Each sorter was then given an envelope which contained the units the other two sorters had independently agreed upon (piles 1-3). The sorter was asked to read those units and decide if he or she agreed or disagreed with the coding of the other sorters. The results were as follows:

Sorter 1: reduced disagreement from 34 units (16%) to 13 units (6%)

Sorter 2: reduced disagreement from 43 units (20%) to 1 unit (0%)

Sorter 3: reduced disagreement from 67 units (31%) to 1 unit (0%)

Finally, a meeting was convened to review the 73 units (34%) that none of the sorters agreed upon. During this meeting the sorters were given each unit and the three categories it had been assigned. The sorters were

told they could discuss the unit and decide upon one of the three categories, a new category, or that no general consensus existed. This was the first time the sorters were able to discuss the categories and how they individually interpreted them. The result of this meeting was consensus on all 73 units. Thus, the final rater reliability coefficient was .97.

Next, the units within each category were reviewed by the researcher in an attempt to identify themes and to provide a narrative description of the nature of college student involvement on a commuter campus. The results of this analysis were as follows:

Use of Facilities. Naturally, for the commuter student, a typical day begins with a commute to the University. Depending on traffic, that commute may set the tone for the day. The commute is followed by the age old problem of locating a parking space. Most of the students tended to arrive on campus according to the time their first class is scheduled. However, some of the students arrived early and spent time preparing for class. Except for those taking only one class, the students had a break during their class schedule. That time was spent either in the campus center or in the library. The low involved students tended to go to the library and study (usually by

themselves) while the high involved students tended to spend time in the campus center either "hanging out" in lounge space or food service areas, or participating in campus or student club activities. Time of departure from the campus varied and tended to rely upon whether or not an off-campus job was waiting, or whether or not there was some purpose for staying. Reasons students would remain on campus following the completion of their classes included on-campus employment, research which could only be done in the library, campus or student club activities, or a preference to study in the library because the environment at home was counter productive toward that goal. It was very unlikely that the students would remain on campus without a purpose.

In addition to use of the library, the one service most students tended to know about and use was Career Services. Like the library, in utilizing Career Services students could do so purposefully and individually. In contrast, students tended not to participate in student development workshops offered by the University and open to the community. Students were more likely to participate in such workshops if they were participating as a member of a class or a student organization (i.e. the speaker was invited to address a particular audience).

Career Development. Most students felt that although college was not compulsory, one had to go if they wanted to get a "decent" job, a job with "some sort of esteem", or a job that had any challenge to it. For students with specific career goals, such as teaching, they recognized the fact that certification or proper credentialing was a prerequisite for entry to the field. One traditionally aged student described the demand for a college education as follows:

"...now it's just like a routine. I mean everybody is supposed to go. Because of society today and how...before a high school diploma could get you a pretty decent job...then it became a college degree and now it's a Master's. So it's like the thing to do..."

Upon entering college, some students knew immediately what they wanted to major in. The students described those students as being very focused. One student in the study wanted to be an accountant and had secured a part time job as an accountant clerk to help pay for college as well as to give him career experience.

On the other hand, some students had changed their major several times and they were still unclear as to what they wanted to do with their life. In fact, one student even identified "finding out what I'd like to do in college...[and] what...I want to be" as the most significant problem he has encountered since he has been in college.

Like the students' majors, their career aspirations were varied. Some students knew in general terms what they wanted to do. For example:

"I want to work with computers...I don't know exactly what I'm going to be doing...I guess...the major programmer for a certain company, institute or whatever."

While other students had more specific plans. One student said he wanted to do research in the biological sciences at the molecular level, and hopes to be a future Nobel Prize winner. Another student had a more focused career map:

"...I want to be a CPA and I would like to retire young and I'm going to go back and get my master's degree while I'm working and hopefully retire maybe in my 40s or - yeah my 40s and teach...I'd like to be a college professor, perhaps later, after I work for a while."

The older students talked more about what it was like to be in the work force without a college degree, and their need for a challenge. For example:

"I was working for a guy in the landscaping business. And then I worked at McDonalds and all the stupid places that everybody works at. And I've done the landscaping. I've done the truck driving. Basically, a bunch of jobs. That's why I'm in college right now. I want to do something that I like to do instead of something that I have to do to survive..."

Mary, who is 49 years old, however, felt differently. She did not necessarily go to college to enhance her career opportunities. In fact, when asked "do you have career aspirations?" she responded "sometimes I do and sometimes I don't".

Although career development is not a senior activity, it certainly becomes more of a focal point during the senior year. Seniors talked about spending time applying to graduate school, taking review classes for the CPA exam, "reading up on different job opportunities", and enhancing their resumes and interview skills.

Academics. Most of the students viewed college as an opportunity to both enhance their career opportunities as well as become a more knowledgeable person overall. In fact one student said as a result of his education he has become more aware of world events: "I read USA Today. I read it and I never cared about news before I started going to school [college]." Other students talked about being able to carry on more intelligent conversations.

The students tended to be very determined to persevere and complete their Bachelor's degrees. All but one student said that if their education was interrupted they would eventually return to complete their degrees. Although most of the students felt that they were attending college for the "right" reasons (e.g., not because their parents sent them), they pointed out that that was not necessarily true for many of the students.

When reflecting back upon their experiences when they began college, most students talked about fear. For example:

"...just afraid you won't be able to perform like you would like to...it's mostly the unknown...that you

might be getting into something that ah you won't be able to do well."

Another described his lack of enthusiasm:

"...more of taking classes that I wasn't interested in. Doing homework when I'd rather be doing something else. Um, another four years of being broke rather than making more money than what I was making in high school. Ah, I had a real negative attitude towards it [college] before I started."

And although college has had its challenges, most of the students described their academic experiences as positive and said they felt they were getting a good education at Christopher Newport. Several talked about the good reputation of the University. Further, they enjoyed being in class with people different from themselves (e.g. older, younger, military, retired).

Most of the students began college with hopes of achieving honors. For example, this student wanted: "To go and be educated and have the grades to show it." For many of the students in this study, their visions of honors disappeared within the first year of college. In fact one returning student described the process as follows: "I jumped right in there with both feet and got slammed dunked the first semester."

But not all students shared that experience. In fact one student said that discovering she could make an "A" has been one of the greatest satisfactions derived from the college experience. Students who have been very pleased with their GPA described the process of achieving

high grades as a basis for motivating them to want to learn.

Indeed, students talked about discovering their intellectual side. In response to the question "What do you like most about college?", this student responded as follows:

"...I love to learn. I like being in the classroom and hearing someone go 'gosh, you know, I never thought about it that way' or 'that's something'...and the next thing you hear yourself talking two days later, and you hear yourself repeating something you just learned, and you feel proud that you've learned it and you understand it and can apply it to other situations..."

This student further relayed the following conversation that she had with a friend who had not gone to college:

"...she says...'every time I talk to you I feel so intimidated because you sound so smart...' she'll say things like that...we were driving down the road and there was this rainbow - it had just rained - and I said 'one of the things college does, Sandy, is,' I said, you see that rainbow right there, haven't you ever wondered what causes a rainbow? You know, what happens in the air that makes a rainbow form?...' It's that type thing where education can be real fun because you get to find out things you never knew, and if you're not taking a class on it, sometimes you might get the drive to go to the library and find out...education can be very stimulating."

Another student talked about his love for research:

"I love going to the library, looking for a specific topic and spending hours and hours in there trying to find all the information on that one topic." In fact that same student has been told by professors that he spends too much time on his research papers. He spent over 400 hours

working on his senior seminar paper and "loved every minute of it."

The process of discovering new knowledge was more important to this student than the grade (although he did get an "A"). He says he gets a lot of satisfaction out of doing research and writing papers about things he chooses to write about. He prefers to read and write about things he knows nothing about so he can learn new things. He described the process of researching his senior seminar paper as follows:

"Most of the material that I came up with was out of medical journals and different things like that. I had no idea what they were talking about and if you keep reading and reading and looking here and there and everywhere, then finally it starts working all together, and you can figure out, you know, what this type of cell is..."

This student recognized that most of his peers did not share his enthusiasm. In fact, most disappointing to him was that his classmates choose "to do their seminars on stupid things." He further made this comment when discussing academic experiences with his fellow classmates:

"...I've found that people who get the 4.0s all the time, or people who are failing out are more afraid to ask questions cause they don't want to look stupid. It's usually the middle guy who'll say: I don't understand that."

Interestingly both of these students who describe discovering their intellectual side will graduate with a GPA lower than 3.0. The one student says he doesn't

believe his grade point average reflects the amount of knowledge he has acquired since he has been here. The other student says her one regret was discovering her intellectual side near the end of her undergraduate career.

Not surprisingly, what students said they liked least about college were exams. Although they wished they could ban them, they tended to believe they were a necessary evil in the world of academia. Other things students disliked about their academic experiences included what one student called busywork; the fact that professors often only give midterms and finals instead of more grades to help balance the final grade; the fact that college, and especially studying, is so time consuming; and placement exams.

Placement exams were particularly troublesome to some students; especially for those students who had been out of school for a while. One student called the experience frightening, while another relayed this story:

"Well, my first semester I'd been out of school for 7 years and I took the placement exams for science and math and I placed in...I had never before had calculus in my life and I placed in um second semester college calculus...I knew that was just bull - I just sat there and marked numbers off...I just went through and made little Christmas tree designs and stuff - I had the design going I guess, I don't know what the deal was...so I took pre-calculus and general chemistry...I failed pre-calculus and I think I got a D in general chemistry..."

Returning students also talked about feeling as though they did know how to study; having trouble retaining what they read (in one case the student said she read everything ten times her first semester in attempt to retain what she was reading); and finding computer projects on the syllabus when one did not know how to even turn the computer on!

Finally, students talked about some of the lessons they learned from their academic experiences including better time management; better study skills; that college is more demanding than it appears and therefore one should avoid taking overloads - especially as a freshman; knowing academic policies for degree requirements is very important and students should be aware that professors sometimes tell students they need to take classes when they really do not; and lastly, studying with other students, or just asking them for academic advice, can be very beneficial.

Faculty. When asked what experiences have had the greatest impact on their education, several students talked about their positive relationship with the faculty. For most, this relationship was not what they had envisioned. They seemed to have expected that college professors would be distant, very serious, and somewhat intimidating. Or in the words of one student: "...when I

first came here I figured the professors were pretty much gods..." What they discovered however, was that the faculty were very diverse and for the most part approachable, friendly, and helpful.

Every student had spoken to at least one professor outside of the classroom. Most of the students felt the faculty they had had remembered their names even after the class was completed. Some students were even on a first name basis with some of the faculty in the department of their major. The students described their relationships with their professors as encompassing both personal and professional elements. On the personal side, comments such as this were typical: "...when I talk to them [professors] I find myself not just talking about academics..." In fact, one student used the word "buddies" to describe her relationship with selected members of the faculty. Other students mentioned they had traveled abroad with professors and some had been to social gatherings in the homes of the faculty.

The students that had these types of relationships with faculty felt they would keep in touch with those professors even after their graduation. They further discussed that even though they considered some of the professors to be friends, that friendship was different than peer friendships. In this vein, the students talked

about the respect they accorded such faculty and one student even discussed boundary issues. For example:

"...we're friends but that's totally outside of the...University...we're very friendly, even when we're here, but anything that involves our personal relationship is outside this campus. It is not discussed on this campus...they're really your friend but you have to...know where the line is for the professionalism. Um, I don't find it hard but I've seen cases where the boundaries have been crossed and I think...some students, especially some that are just starting as freshmen, they don't know where the boundaries are...I've never seen a professor cross a boundary. I've always seen a student cross the boundary, and I've seen how it's very...hard on the professor to have to tell them hey - there's a boundary issue here. But they always do and it's always resolved..."

Not only did the students talk about maintaining respect and professionalism in their friendships with professors, but they also believed that those friendships afforded them more learning opportunities. One student described that process as "becoming involved and getting on a level with a professor in your own level" - inferring that making a "human connection" with a professor will in turn foster student learning and development. Perhaps then, student-faculty friendships are the vehicle for 'transforming' a professor from the distant, intellectual lecturer into a mentor. For example, this student described his relationship with his favorite professors as follows:

"They've been...like my mentors. They've taught me a lot. They've been there for me emotionally and

personally, ah, and to this day I still learn a great deal from them even though I may no longer have a class with them..."

Although the students felt very positive about the faculty overall, many of them had also had negative experiences. The students believed however, that those experiences were limited to a few faculty and said that the experience(s) did not lower their opinion of the faculty as a group or of the University overall. Although he did not fully understand the concept, one student attributed his negative experience with a professor to tenure:

"...I've heard that those professors that are ten year [sic], that have reached their ten year [sic], they feel as if they can do anything, or they're going to do anything they want, you know, whether it's a certain attitude or whatever it might be..."

In general, the students believed that even the negative experiences were indeed learning experiences. For example, one student had this to say about a notoriously difficult professor:

"...I know everybody hates him...everybody will bad mouth him but...he taught me that you really have to try hard in order to get what you want."

Another student talked about a professor she found rude, intimidating and very unapproachable in this vein:

"...when I first came in [matriculated] I felt as though I was down here and the professor was up here...I've overcome that...yes he [professor] is wiser, yes he [professor] is knowledgeable about this...but I also have learned that I too deserve respect...I sat back and really was able to evaluate...yes he's [professor] busy...yes he's an

important person and everything but if I have a question it deserves to be answered...it gave me a lot of confidence...when I go to a professor I don't feel like - oh my gosh, what if he [professor] thinks it's a stupid question. I mean that's the last thing that enters my mind...I'm here for a reason, this is a legitimate concern through my eyes so I'm gonna ask it..."

Other lessons students learned from their experiences with faculty included that if you need help you will have to ask for it. Faculty tend to be helpful but they don't offer assistance, you have to ask for it yourself. In fact some students who described themselves as easily intimidated by professors, found that simply talking to a professor in his or her office helped the student to feel more comfortable when in class. The students also found that most of the professors were interested in what they had to say and respected their opinions.

When discussing their experiences with faculty, students clearly had opinions about preferred teaching styles. The majority of the students said they liked professors who taught as opposed to lectured. When asked what the difference was, one student said: "...I don't really get bored when someone is teaching...I get bored when someone is lecturing." To the students, the important elements of teaching focused on class interaction and discussion. Further, teachers are more personable with the students than are lecturers. Lastly, teachers use a lot of examples drawn from life experiences, as opposed to

lecturers who tend to focus more on "straight theory".

The result:

"...He's [professor] like the Redskins [football team], either you love him or you hate him...honestly, when I first had class with him, when he was finished, I wanted to stand up and just yell bravo and just start clapping, because through my way of thinking, out of all my professors, he's been the one that has been able to zero in and keep my concentration just non-stop...I'll just sit with my mouth hanging open, listening to him...I don't even want to write notes because I don't want to get distracted from what he's saying because he's very clear. He gives excellent examples about things. He's really just [a] powerful professor in my opinion."

Finally, students were asked to reflect upon their experiences with faculty and to identify characteristics they thought the best professors possessed. Such characteristics included treating all students fairly; making students feel like they mattered; caring about the institution as a whole and its reputation; being relaxed so that the students could feel comfortable around them; being easy to talk to; being friendly outside the classroom (e.g. saying hello to students outside of the classroom and being genuine in doing so); being understanding (i.e. being willing to listen to individual situations and make fair decisions regarding such circumstances); being knowledgeable about their profession; being a teacher; and being human.

Administration. Overall, the students had positive things to say about their experiences with the administration and administrative offices. The most common comments were that the administration was friendly and helpful. For example:

"...the administration is very friendly and helpful. That's another thing, when I first came in here, because of my...uptightness, if somebody over in, um, registration, or somebody had not been kind or nice, I probably would have pulled back. But everybody was helpful. They were very...kind, and...I felt like...this would be all right."

Rose, the student from Mexico, even had the privilege of attending a cookout at the President's home:

"...I thought one of the nicest things when I first got here was..right after school started... Dr. Santoro had us [new international students] over for Labor Day because we had no idea what it was or why it was celebrated...and I thought that was very thoughtful of him to have us over...he had a cookout at his house."

Not everything was positive for the students, however. Among their complaints were tuition increases, departmental politics, the way the librarians handled monitoring noise, communication regarding policies, registration, and parking.

One student said he was well acquainted with campus police. Apparently one semester he "got a ticket every day for eight days because the parking was just outrageous." One day he "just wrote a note on the windshield" saying "I'm over here in such and such a room, if you see a parking space you can come get my keys and pull it over

there." Naturally, the note did not prevent another ticket. After talking to campus police, he decided to appeal the tickets. The Parking Committee agreed to drop all but one ticket. The student seemed to have a good sense of humor about the story and did not seem to feel any animosity toward campus police nor toward the University. In fact, this same student said he made friends with one of the officers. Occasionally, they would get together and work out in the gym and then play basketball. Rose also discussed her relationship with campus police. She described them as friendly and said she appreciates them keeping "an eye out" for her.

Also not surprisingly, a couple of the students thought the way registration was handled was "a pain", in that they had to wait in line. Another area of discontent for at least one student was the library. This student spent a lot of time studying in the library, and described her frustrations as follows:

"...I get very aggravated that they [librarians] don't, I don't know, I guess monitoring is a bad word for it, but that's the only thing I can think of. When you're trying to study, I mean they've got these signs that say not to talk and you've got students having little mini-parties up there. It's very aggravating and I wish somebody would come around and you know, say 'excuse me but if you want to sit and talk...you can go down here.' That's the most aggravating thing to me is that they don't...walk through once in a while and see these two people there for three hours talking when other people are trying to study. I guess it could be up to me to say something, but..."

What may surprise some people is that the student speaking is 31 years old. In fact, this student, who was minimally involved, had the most complaints. She thought the decision to have classes in the bank building was "stupid", and that the school did nothing to make sure she felt comfortable as a student, nor to ensure she knew what she was suppose to do as a new student and as a senior (e.g. filing an intent to graduate form).

A couple of the students commented on what they called departmental politics. Although they didn't expand much on this topic, what they seemed to be referring to is that within departments the faculty tend to be cohesive but not among departments. The students tend to cite examples such as the Music Department and the Theatre Department (although the student said that relationship is fine now), and the Marketing/Management Department and Accounting Department.

Finally, some of the students said that although they thought the growth of the University was positive they weren't very happy about the tuition increases.

Self-Understanding. Although most students were somewhat taken aback when the interview began with the statement: "Please describe yourself", the students demonstrated self-understanding in response to that question, as well as throughout the interview. They

typically began their answers to that question by identifying demographic information. Like the student body, the students who participated in this phase of the study were very diverse. Their ages ranged from 20 to 49. Males, females, Caucasians, African Americans and even one student from Mexico were included in the sample. Some were married; some lived at home with their parents; some worked; some attended college full time, while others attended part time. Some students had a long commute to the University while one student lived within walking distance. Their GPAs and majors were equally diverse.

On a somewhat deeper level, they discussed their struggles with self-esteem, self-respect, overcoming shyness, developing a sense of independence, self-discipline and related issues of time management, enhancing communication and interpersonal skills, developing a stronger sense of self and liking that person, test anxiety, study skills and overcoming procrastination. Some students discussed their regret for not getting involved in clubs, while others discussed their conflict with being over-involved and learning to find the balance between their academic and social lives. Some loved to participate in class discussions while others never quite got over feelings of anxiousness.

Academic success, or lack thereof, and how that made them feel, was another theme that emerged from their

conversations. In fact, one student said when he was really struggling with his self esteem due to not meeting his own academic goals for GPA, someone told him this: "What do they call the guy that graduates at the bottom of his class out of med school - I was like, I don't know - they call him doctor too!" This student said he would remember that story for the rest of his life. That story helped him reframe his experiences and expectations and may have even prevented him from dropping out.

Family and Friends. Consistently the students talked about the influence of family and friends, especially with regard to their decision to attend college in general, and for some, Christopher Newport specifically. Some students were simply under peer influence: "The group that I was with in high school - everybody was going to college, so I had to too." Some of the younger students were encouraged, or in some cases strongly persuaded, by their parents to attend college.

In some cases, family ties were so strong the students chose Christopher Newport so they wouldn't have to be far from their families:

"Well my mom and I are basically pretty much the only family we've got...I don't think I'd want to be too far away from her; I know she couldn't take it if I was far away from her."

For Cindy, it was her family life that persuaded her to go to college. She saw college as a chance to be different, better, than her brothers:

"...I had a pretty rough family life up until - it has always been, but I was behind [in high school grades] and I started to get into the wrong type of crowd...it's all that I was around as far as my brothers...I was constantly exposed to people who were constantly skipping school...I got to the point where I realized, this is not me, you know, I'm better than this...at that point I moved in with my mother and stepfather and just made a complete turn around..."

Rose, the student from Mexico, had a lot of support from her family and friends in terms of going to college, but not for going so far from home:

"...my family and friends down in Mexico...kept saying...why do you want to go away. You don't know anybody. You have no friends there. You know it's going to be so hard. You're gonna have to start from scratch and everything. And that's I guess the only time I really thought about transferring."

But her first Christopher Newport friend helped her make the transition:

"Dr. Park...had an international party...he introduced me to Corrine and he told me she was from the Bahamas...we saw that we had a lot of interests and similar experiences, both being here alone and not knowing what was going on..."

Rose indicated that the International students had several opportunities to get together. It was through that avenue that she began making friends and feeling a part of the University.

One student, Todd, got married when he was 18 and divorced six months later. His first wife dissuaded him

from attending college. His family culture taught him that a "you're the man in the family. You're big, you're stupid, use your back and bust your back. Bring home the money and that's it." After his divorce, he joined the military and met his now second wife. While his first wife, and family culture, had dissuaded him from pursuing a college education, the military culture and most importantly, his second wife, supported that idea:

"...we [Todd and current wife] talked about what we wanted in a relationship, and what we wanted out of life...She [wife] helped me figure out that...what I really wanted to do in the first place was to go to college."

Both Todd and his current wife have left the military. His wife currently has a Master's degree and is pursuing an advanced degree. He also mentioned that he thought it was really "neat" that his wife "snuck over here [CNU]" one day and bought him a CNU sweatshirt for his birthday.

Although Todd's wife is very supportive of his education, all of the married students, including Todd, talked about how their marriages can also put additional burdens on completing their education. They talked about struggling to find time to spend with their spouses and the many household chores that needed to be done. One student said her husband "doesn't pay that much attention [to her college education]...he doesn't say it's test time, you don't have to cook - none of that; it's just sort of life as usual." Another student said her husband

understands when it is exam time that he is to leave her alone. She said he is used to her being very "focused". She also feels he was "a little surprised at how smart I was" and believes they have more intelligent conversations now. Further, she participates in their financial decisions, whereas she didn't before she attended college.

None of the students had children at home which can be another strain on the time available to dedicate to one's education. However, one student said she waited to pursue college until after all the children were grown and had been to college themselves. She had always wanted to go to college but since she did not have the money, she, like many other women in those days, decided to get married instead. She describes her family as traditional: "he worked a lot; I did the kids." After her children had been through college, a friend who was attending Christopher Newport at the time, convinced her if she was going to attend college, she "had better go do it now." Since she is a part time student at 49 years of age, she was not sure whether or not she will pursue a career upon graduating. She mentioned however, that part of her would really love to get a job if she is still healthy - after all, her "mother did it"!

Peer Group. When asked to describe their peers, the students immediately talked in general about the diversity

and specifically about the age range. For the older students, knowing the student body consisted of many older students helped to develop a sense of comfort - it would be easier to "fit in". The younger students either mentioned they enjoyed being in class with the older students or offered no further information. Another characteristic often commented upon was the fact that many of the students worked.

The students further noted that there was a mixture of full-time and part-time students and hypothesized that:

"...full-time students mostly have a lot of school spirit and loyalty. [They] spend a lot of time here doing a lot of extra activities at school. And the part-time students just come, go to class and go on with their business."

Independent of the full-time/part-time status hypothesis, most of the students described the study body as "somewhat involved". Regardless of their involvement level with activities however, most of the students felt the majority of their peers were more independent than students at other universities, that they took their education seriously and were involved in terms of the academic experience. Many mentioned however, that some students were simply here because their parents "sent them".

One student said that although it's not a bad place to be, and he likes it, it's also kind of "harsh". He feels that "if you're just a regular student...you don't really have too many friends...nobody really...want[s] to

talk to you...if you're not involved in anything here..."

He attributes this to being a commuter school because:

"...everybody commutes and nobody really has to stay here...you just come and you see somebody, you don't really talk to them, then you go home...but if you...have to live around these people...all year round, eventually you...[will] talk to them or get to know something about them..."

This student wasn't the only student who mentioned difficulty in meeting students. One student who described himself as shy said he has tried to meet one student in each class. He finds the easiest way to do that is to look for students who look like they need help. By offering assistance to students (e.g. tutoring, forming study groups, going with someone who needs to talk to the professor but is intimidated), he has both made friends and increased his level of satisfaction with the college experience. Another, student who had difficulty meeting friends, offered this solution:

"Most students...I found, especially the first two years - I think a lot of it was me but a lot of it was...there was no interaction. If the professors don't take roll, you don't even know who's sitting next to you unless you start talking to them, and if you get to class and sit down as class is starting, and get up when it's over, you'll never know the students. And ah, I think that's what I did the first year and a half, maybe two years...now that I'm in classes with a lot of the same students...I'm getting to know them more. But in the beginning it was horrible...you didn't know anybody...you recognized the faces but you didn't know anybody's name cause most of the professors don't take attendance..."

Thus, this student felt that by simply taking a few minutes of class time to have the students introduce

themselves (or at a minimum call roll) would help students to get to know one another and feel more a part of the community. This suggestion is certainly less costly than becoming a residential community. However, this sense of alienation described above was not a unanimous experience. Indeed, many of the students described their peers as friendly, said they met their best friends at Christopher Newport and more than one student even identified college friendships as having been the greatest satisfaction derived from their college experiences. In contrast to the above descriptions, this student relayed the following:

"...because the campus is so small...when you walk across campus, if you were to look at all the people and watch how many people go by and [say] 'hey, how you doing.' It's just like every where you go...when you look at people...you see somebody within at least a couple seconds that you know, or somebody in your class..."

For some of the students, college gave them an opportunity to make friends with students different from themselves. For example:

"...it wouldn't have been very likely for me to come up to a sorority girl and say 'hey, how you doing'...and talk to her, whereas through the [CNU Student Leadership] Institute I got to know them and I made friends that I probably wouldn't have otherwise..."

Another benefit of interacting with one's peers was the opportunity to engage in "a lot of interesting conversations". The students said topics included everything including religion, politics, world events, and

relationships. An African American student said he met students who

"had never been around a lot of Blacks before...and they thought a lot of things are different...about Blacks in general that they really didn't know...and now they know a lot of stuff...and they're like...I didn't know that...it's kinda funny..."

Thus, college has given this student an opportunity to talk openly with a few select people about their cultural differences.

A final observation was offered by a student who has been attending Christopher Newport for six years. She feels that the students don't interact with one another as much as when she was a freshman:

"...the first time I ever walked into The Terrace [on-campus pizzeria] I didn't know anybody in there. It was the first week of school...I was intimidated...because there were all these faces. I mean they were older than me, or they'd been here for a long time and they knew the routine, and knew the system, and I was just fed to the wolves. But a couple of people...would just say hi and take you over and sit you down with them and introduce you around...I could always walk in some place and maybe have one person recognize me and just you know bring me in. Now it's just like hi and that's it."

This student attributes part of the decline in student friendliness to the disappearing student subculture referred to by Horowitz (1987) as the "college insider".

Student Subcultures. The students talked briefly about three predominant subcultures within the dominant student subculture. Those subcultures include African

American students, college insiders, and social fraternities and sororities.

Christopher Newport University is a predominantly White institution. According to one African American student, he does not feel overt racism exists, but he is disappointed in the separatism that exists amongst the students. Although one will find some level of interaction between white and black students, at certain times of the day black students tend to occupy one part of the campus center, while white students occupy another section. Dances and events sponsored by predominantly African American clubs, such as the Minority Student Association or the National Pan Hellenic fraternities and sororities, were attended primarily by African American students. The reverse was true for predominantly white student organizations.

Students expressed an interest in collaboration and perhaps more co-sponsorship. They felt some separatism was beneficial but that more effort should be directed toward understanding difference and especially in finding commonalities and emphasizing those commonalities through shared activities.

The students also talked about the college insiders. The Christopher Newport "college insiders" were somewhat different from Horowitz's (1988) typology. Here, the insiders tended to be students who knew a lot of people on

campus and who also spent a lot of time on campus. They would participate in a lot of social events but were not necessarily a member of any particular club. They had been students for "a while" and knew the student traditions of the past. They knew how to have fun without being immature. They were very outgoing and friendly and not "cliquey". One student believed that there were not very many college insiders left at Christopher Newport and that that was due in part to those who had graduated and the growth of the Greek system.

Over the past five years the Greek system has doubled in the number of chapters, and more than doubled in membership. Although membership in a social fraternity or sorority would not preclude one from being a college insider, it would not guarantee it either.

The value of being a member of a social fraternity or sorority increased as the system grew. Greek membership was viewed as a sign of being a "real" college student. For those students who were not members, it was assumed that one was either not up to membership standards, one was too old for participation, worked too much and did not have the time, or one was not wise enough to understand the benefits of such an association.

The primary loyalty of a fraternity or sorority member must be to one's own group. Thus, a member of a social fraternity or sorority could associate with others,

and be a member and even a leader of other student groups, as long as the loyalty remained. That sense of loyalty appears to have been so strong that it violated a basic value of the college insider (i.e., not being cliquy).

What does membership in a social fraternity or sorority offer? According to the students, one gets to feel good because they are part of something on campus. If the fraternity or sorority impacts the campus, then the member can say they are part of it. Social fraternities and sororities at CNU place a high value on, and are known for, philanthropic activities. Through the sorority or fraternity an individual has an opportunity to voice an opinion and feel that they matter and are respected by their peers. Of course sorority and fraternity membership offers you genuine friendships that can be counted on and a very active social schedule. Anyone who is a member of a fraternity or sorority can conclude they are more popular than those who are not members. Members may believe that membership gives them a sense of superiority. For example, in answer to the question, "How does the fraternity make you feel?", this student responded as follows:

"I feel respected...people...put me a step above other people...tend to look at me at a higher level than they would somebody else..."

One student, who was past president of her sorority, explained that initially most members just wanted to feel a sense of belonging. Thus, the very busy social calendars

tended to take priority over academics. It becomes very important to be seen and feel like one is well known by the other students. Later in one's academic career, peer popularity and the social life begin to become less important and academics become more important. This change occurs at different times for different students.

Finally, it was interesting to hear one African American student talk about his experiences with joining a predominantly white fraternity. He feels since this fraternity had accepted him, and some other African American students, the fraternity was different from the other social Greek organizations, in that it was not exclusionary. That does not imply, however, that a selection process was not involved. He was more proud about his membership than anything else involving the college experience. Although he feels accepted, respected and supported by his fraternity brothers it was sometimes difficult if the chapter had a social event with another chapter, even if it was the same national fraternity. He thinks about the "good ole southern boys" he might be meeting and sometimes "sensed hostility". But that hostility never came from his own brothers.

Since this group was, according to the members, culturally diverse, they, as compared to the other Greeks, had to compromise more. For example, it was difficult to have a dance because everyone had different musical

tastes. According to this member, the fraternity talked a lot about social issues and valued open dialogue about racial difference. The goal was not to change anyone, but simply to be more understanding towards another's culture.

Student Involvement in Out-of-Class Activities. When asked, "What does student involvement mean to you?", students frequently referred to having school spirit, caring about the University, and getting the most out of one's education. Student involvement tended to refer to activities outside the classroom. Frequently cited examples of how students are involved outside the classroom included club membership, making friends with other students, attending events (athletic, social, cultural, intellectual), writing to the student newspaper, staying on campus to talk to other people, participating in group study sessions, and wearing clothing that has Christopher Newport on it.

Regardless of their involvement level, every student had participated in at least one activity, one time. Further, almost everyone read the student newspaper occasionally, while many read it frequently. The other common experience shared among the students was the use of Career Services.

For the students who became involved in structured activities (e.g., club membership or participating in a

theatre production), that involvement tended to be the result of one of two forces. In the case of an event tied to a perceived talent (e.g., athletic team or theatre production), the students tended to be confident in their ability and have a strong affiliation with that activity. Those students probably would have attempted to become involved in the activity regardless of where they went to college. Furthermore, when the student attempted to become involved in that activity, they were successful (e.g., they "made the team").

The other way students tended to get involved in activities, especially clubs, was through peer encouragement. Again, that encouragement included supporting the student and many times even doing the activity with the student (e.g., high school friends "rushing" a sorority together).

In contrast, one of the students attempted to get involved on his own, three times during his freshmen year and never really made the connection. First, he wanted to play basketball so he went by and saw the coach. The student was not confident he was good enough to make the team, and hence decided he probably would be better off putting the time into his classes instead. Then he decided since he loved music, he would be in the band. So he went to one practice. He described that experience as follows:

"...To tell you the truth I couldn't hang...It was kind of hard. Even though they didn't really show any

signs of competition, we would pick up any piece of music and just start playing - they really didn't have chairs...so it was kinda hard for me - it just took me one practice - so I never came again..."

Not only did the student never attend practice again, but no one (e.g., the band director) ever followed up to encourage that involvement. Finally, he decided to go to a club meeting for the curriculum club of his major, and had this experience:

"I went to one meeting and I didn't really see any...young people like me. They were basically older...I think it was basically the staff that was there..."

In fact the people there were most likely students. Yet, again, no one followed up to encourage his participation.

Students who had not participated in many events, expressed an interest in becoming more involved. In fact one student said during the first interview that she had wanted to join the curriculum club for her major, but always needed to study when the club held meetings. During the second interview, she said she planned on joining the club that semester. Most of these students expressed disappointment in not being part of an organization, especially curriculum organizations, even if they were not interested in the "social aspect" of college. They said they felt they were "missing out" and were quick to point out that they did have other obligations however. It seems very possible that those other obligations did not really prevent involvement but helped the students justify their decision not to be involved.

There were a couple of interesting cases of student involvement that are worth noting. First, the student with the highest quality of effort score, as measured by the CSEQ, did not consider himself to be involved because he was only minimally involved in formal activities. Yet, he often spends 12 hours a day on campus. That time is spent either in class, in the library, chatting with his professors informally, or "hanging out" with a small group of friends in the campus center.

The second interesting case was that of the lowest involved student, as measured by the CSEQ, who participated in the qualitative component. That student is a 49 year old, part time student. She is married and does not work outside the home. Her life is very full and college is not the focal point. College is simply an added dimension; something she always wanted to do, so she decided to take a class. Thus, it is not surprising that her quality of effort score was low. However, when asked if she used various services (e.g., career) or participated in programs (e.g., time management workshops) she became very interested in what the University had to offer and began to ask a lot of questions. She thought she could benefit from some of the programs and even volunteered to help start a women's network program.

The other very interesting case was that of a low involved student who appeared to be very involved. He has

been in about 15 theatre productions. He is very close with some professors, and in fact, some of the professors will be in his wedding this summer. He even met his fiancée in a dance class at Christopher Newport. When asked what it is like to be a Christopher Newport student he responded: "I don't really feel like a student..." During the interview he was asked if he could distinguish between the involved and the non-involved student. He said yes, and proceeded to use his own experiences as an example of the non-involved student:

"...Even being part of the theatre department, yeah you're here a lot but you're not really - it's not really like I'm at school. I'm here performing. I'm doing a job. I'm doing something I want to do...I never related it to being at school. It's kinda like its own world."

However, when asked later to define student involvement, and then to respond to whether or not he considered himself to be involved, he replied:

"Yes...I'm involved because I do a lot of extra-curricular things with the theatre and the music department that I don't have to do. It's not...required for me to do, it's something that I want to do..."

Hence, his first answer appears to be in response to how he sees himself, while the second answer appears to have been interpreted as how do you fit the definition of involvement. It seems that the theatre is so much a part of his life that the location of where the involvement takes place is secondary, and perhaps even unimportant.

When reflecting upon their experiences in life outside-the-classroom, students felt they gained many benefits. For example, they said it taught them how balance their social and academic life and that it made college more rewarding and stimulating. One student said that her involvement on campus transformed the college into her second home and that she felt like she was part of a family. These students talked a lot about rich memories of their college experiences as compared to the less involved students who tended to have trouble answering the question: "What has been the most memorable activity you participated in outside the classroom?"

Regarding the involvement of the student body overall, the students interviewed felt some students were more involved than others. There is a portion of the student body that has a lot of school spirit, while there is another large constituency that comes to class and then leaves. These students are believed to have no ties to the University and "probably could care less". The students further believed that the University offered many diverse and interesting learning opportunities. If people weren't involved it was because they choose not to be. For example:

"There's a lot of variables in my opinion. It has a lot to do with personality. I think that's a key...factor...people being insecure about themselves...insecure meaning if you'd take something like joining a sorority for example, insecure about not being wanted, not being accepted. Being more

afraid of being turned down then you would be of looking forward to possibly being accepted. Um, age. The age difference among the campus...I mean if a middle aged male [matriculated]...to get a feel for a couple of the classes...then maybe [he could get involved by attending] a basketball game every now and then, or something like that. But if you were to take somebody that maybe was coming back to school that never went and regretted it and decided to go gun ho and was here, you know, was just heart and soul poured into it - I don't see them being as involved..."

Thus, the students believed that it was okay for different people to have different levels of involvement, but they would like to see more school spirit overall and an increase in participation rates among the younger students.

Commuting. When asked what it was like to be a commuter student, the typical response was "I don't know what it's like not to be a commuter student." The students remarked that it was really no different than when they drove to high school or to a job. The biggest complaint about being a commuter student was the cost of gas and traffic. Students said sometimes the traffic made them late for class but they were never penalized for being late.

Students that were older and or married pointed out that commuting was their only viable choice. One student, who lived within walking distance of the University, said she didn't feel like a commuter student because everything is so close.

Some of the more traditionally aged students said they would have preferred to live on campus but finances eliminated that option. For those students who would have liked to have had the opportunity to live on campus, they believed that such an experience would have indeed enriched both their social and academic life. On the other hand, students also observed that "residential students get too involved in social activities as well, and they perhaps miss out on a lot of the academics that maybe commuter students get more of." In fact, several of the younger students knew of students from their high school who had gone to a residential college and "flunked out" because they partied too much.

Other positive experiences the students associated with commuting included having time in the car to think and prepare for class, as well as having the opportunity to get away from campus; "not being stuck there all the time."

Students who had longer commutes were more likely to stay on-campus during class breaks. Most typically those breaks would be spent either in the library or the campus center. Students who lived nearby would often spend breaks running errands or going home. As stated earlier, time of departure from the campus varied and tended to rely upon whether or not an off-campus job was waiting, or whether or not there was some purpose for staying.

Satisfaction. Overall the students were satisfied with the University and described Christopher Newport as a "good school". For example: "...once I came to the orientation...I felt really comfortable and I was impressed with the school and the environment and the people." Students described their experiences with the University as positive, awesome and very satisfying. A couple of students used words as strong as "it's an honor to be a student here" and I'm "very proud to be a Christopher Newport student." Several students were pleased with the strong academic reputation and talked about how it felt good to attend a "prestigious" University.

The levels of satisfaction, however, varied from students being very enthusiastic to a couple students who felt somewhat neutral, or had mixed feelings about the University. For instance, one student who felt "comfortable" at the University, also described the environment as "hands-offish...everybody seems to be working in their own little world...even departmental wise". Another student who was enthusiastic about college, and who had been enrolled for several years said:

"I miss the days when everybody seemed to know everybody and cared, and the parties were huge and you kinda knew everybody there, and even if you didn't, you didn't care..."

When asked if they ever thought about transferring, the majority of the students said no. They said they were happy at Christopher Newport and thought they were getting a good education. On the other hand, a few students had contemplated transferring. All of those students said they thought about transferring either because the other University offered a program Christopher Newport did not (e.g., nutrition), or they thought the other University had a stronger program (e.g., a theatre major believed Virginia Commonwealth University had a theatre more comparable to a professional stage). Although these students contemplated transferring, they did not transfer because they were satisfied (or too comfortable) or it was not economically feasible.

At least half of the students owned and wore Christopher Newport University clothing and most displayed decals on their car. Some students possessed a lot of Christopher Newport University paraphernalia while others had simply a notebook or pencil. Everyone had something.

Finally, the students were asked to respond to two critical incidents in writing. First, in describing an incident in their college life that made them feel uncomfortable to be a Christopher Newport student, the most common response was: "I have not encountered an incident that made me feel uncomfortable being a CNU student." One student, however, talked about feelings of

isolation as a new freshmen, while another younger student talked about taking a night class with many older students in the class. Another student described a negative experience with a professor, while another discussed her frustration with the University's image. Lastly, a student describe an altercation off-campus with other CNU students.

In contrast, all but one student had something specific to relate in response to the statement: Please describe an incident in your college life that made you feel proud to be a CNU college student. The most frequent response to this statement had to do with the high academic standards and reputation of either the University overall, or specific departments. Other responses included the change from College to University, representing the University at a national conference, participating in an activity on campus, and being nominated by a professor for an academic award.

Institutional History. Christopher Newport was known to the students for being a local university with a strong academic reputation, having a relatively small faculty to student ratio, its historical affiliation with the College of William and Mary, having a small and friendly environment, and having a diverse student body, especially with regard to age. All of these aspects of the

institution were cited as reasons the students decided to attend Christopher Newport. In addition, the students talked positively about the future of the University and showed enthusiasm, or at least support, for the residence hall and Master's level programs.

One student did, however, talk extensively about how the Institution's history has, in her opinion, inhibited college student involvement:

"I think there is a stereotype on Christopher Newport that people just haven't...overcome...the university status has changed that somewhat, but...people thought it was still in downtown Newport News...they think commuter campus, you know, it's not the same...and people are working 3, 4 jobs and that type thing...I think it just has to do with people have it in their mind before they even come and don't...give themselves an opportunity to get involved because they think it's not worth it or it's not the same as it might be if you were up at Clemson...it's sad...when people think of university they think of dormitories...fraternity houses, you know, more typical type thing you'd see on television...when you think of going to this or going to that...especially if they have a football team...and Christopher Newport obviously doesn't have things like that..."

This student believes that since these elements of college life are missing, then the effort it takes to become involved, becomes less worthwhile. Further, since other students believe students are too busy with off-campus responsibilities (e.g. 3, 4 jobs), it simply becomes easier to justify non-involvement. For example, as one student stated earlier, she wanted to go to a club meeting but always needed to study when the meetings were scheduled. This same student described a typical day as

encompassing class, library, back to class, home to watch "soaps", study, fix dinner, and spend the evening with her husband. Thus, in this student's opinion, history and perceptions combine to create a self-fulfilling prophecy which functions to inhibit involvement.

Research Question 2

What are the profiles of highly involved commuter college students? How do they compare to commuter college students who are minimally involved?

Procedure for analysis: By reading the qualitative data, a list of words students used to describe themselves was created. The list was then reduced to ten characteristics typically found in profiles. Each of those characteristics was sorted with regard to involvement level and a Fisher's Exact Test was used to determine if any of the profiles were significant or the result of chance.

Results: Based on the data analysis, the five highly involved commuting college students could be described as follows: slightly more were women (3 of 5); most were younger than 26 (4); two were married; three were Caucasian, one was African American, and one was Mexican; slightly more were independent - two were dependent (lived at home with their parents); the majority (3) commuted to college greater than 30 minutes one way; most were full-

time students (4); they were just as likely to be employed on-campus (2) as they were off-campus (2), or not at all (2); and it was very unlikely for them to be a first generation college student (1).

The five minimally involved college students tended to look like this: most were men (3 of 5); most were younger than 26 (3); two were married; the majority were Caucasian (4), while one was African American; three were dependent; and most lived within a 30 minute commute (4); slightly more were enrolled full time (3); none were employed on-campus, while three were employed off-campus; and most significantly, all were first generation college students.

In addition to presenting the above delineated profile, a Fisher's Exact Test was computed to determine if any of the characteristics were statistically significant. The contingency table, null hypothesis and result of the Fisher's Exact Test for the one significant statistical test is presented below.

Comparison of First Generation College Students and
Involvement Level

1. Contingency Table:

		First Generation College Student			Row Totals		
		Yes		No			
Involvement Level	High	I	1	I	4	I	5
	Low	I	5	I	0	I	5
Column Totals			6		4		10

2. Null Hypothesis

There is no association between the variables of whether or not one is a first generation college student and level of involvement in the college experience.

$$H_0: P_{i1} = P_{i2}$$

3. Fisher's Exact Test

$$p=.02, p<.05$$

Thus, the Fisher's Exact value was significant enough to reject the null hypothesis. Therefore it was concluded that first generation commuting college students are likely to be minimally involved in the college experience.

Research Question 3

Are commuter students with certain characteristics and experiences more likely to participate in some activities and not others?

Procedure for analysis: To examine this question an unordered meta-matrix was created. By reading the qualitative data, a list of words students used to either describe themselves or their experiences was created (list 1). The list was then reduced by clustering similar words. Thus, the characteristics and experiences identified by the subjects were as follows:

List 1: Student Characteristics & Experiences

Age (26 or older versus younger than 26)

Marital status

Race (Caucasian, not Caucasian)

Gender

Lives on own (independent) versus lives with parents
(dependent)

Lives within walking distance

Commutes greater than 30 minutes one way

Enrollment status (full or part time)

GPA (3.0 or higher, 2.99 or lower)

Works while going to college

First generation college student

Opinions about college (favorable, neutral)

Leader

Social Activitist/Change Agent

Status Striver

Artist

Focused (clustered with determined, perseverance,
doesn't put things off)

Intellectual/Intelligent (clustered with
knowledgeable, enjoys/loves/takes advantage of
learning)

Insecure (clustered with sensitive and intimidated)

Shy (clustered with quiet)

Procrastinator

Well rounded

Easy going (clustered with laid back, don't get angry
easily, happy)

Self-sufficient

Open minded

Religious

Outspoken

Outgoing (clustered with extraverted and spirited)

Friendly (clustered with amicable)

Education is not a priority

Non-involved

Follower

Stubborn

Prefers small college atmosphere

Has definite plans to go to graduate school

Selected to serve on faculty/staff committees

Regrets not participating in CNU clubs and
organizations

Has many student acquaintances

Has few student acquaintances

Has had negative experience(s) with other CNU
students

Has had positive experiences with the administration

Has had negative experiences with the administration

Spends a lot of time in the library

Spends a lot of time in the Campus Center

Has formed friendships with members of the faculty

Has had negative experiences with professor(s)

Enjoys participating in class discussions

Feels anxious in class

The data were read for a third time and a list of activities students indicated they participated in was created (list 2):

List 2: Activities

- Member of a social fraternity or sorority
- Member of a curriculum club
- Member of a special interest club (e.g. International Students Association)
- Member of the Student Government Association
- Graduate of the Student Leadership Institute
- Student Orientation Leader
- Attends CNU athletic events
- Attends student development workshops (e.g., multiculturalism, time management)
- Attends student events (e.g., dances, club trips)
- Attends campus events (e.g., theatre productions, concerts)
- Reads the student newspaper regularly
- Participates in theatre productions
- Participates in study sessions (independent of a professor)
- Uses CNU recreational facilities
- Uses Career and Counseling Services (attends resume workshops, uses resource library)

A chart was created with each of the clusters of characteristics and of experiences (lists 1 and 2) placed on the horizontal axis. The vertical axis contained the list of activities the students participated in (list 3).

For each activity (coded with student ID), a check mark was placed on the chart for each applicable characteristic and experience. Check marks were summed in each cell. The unordered meta-matrix was then broken down to examine the variables independently, since computing chi-square on the overall matrix would seriously affect the probability of type-I error. Further, since the total sample size was only 10, a Fisher's Exact test was used in place of a Chi Square Test for Association.

Results: Presented below is an examination of 45 characteristics and experiences. Each characteristic and experience was tested to determine whether or not an association with any of the identified 15 activities existed. Thus, utilizing the Fisher's Exact Test, 720 statistical analyses were performed. Of the 720 tests, only three associations were significant. Presented below are the contingency tables, null hypotheses and results of the Fisher's Exact Test for the three significant statistical tests.

Comparison of First Generation College Students and Attendance at Student Events

1. Contingency Table:

First Generation College Student

		Yes		No			
Attends	Yes	I	0	I	3	I	3
	No	I	6	I	1	I	7
<i>Column Totals</i>			6		4		10

2. Null Hypothesis

There is no association between the variables of whether or not one is a first generation college student and attending student events.

$$H_0: P_{i1} = P_{i2}$$

3. Fisher's Exact Test

$$p = .033, p < .05$$

Thus, the Fisher Exact value was significant enough to reject the null hypothesis and therefore it was concluded that first generation commuting college students are not likely to attend student events.

Comparison of Insecurity and Attendance at Student Events

1. Contingency Table:

Describes self as Insecure

		Yes		No			
Attends	Yes	I	3	I	0	I	3
	No	I	1	I	6	I	7
<i>Column Totals</i>			4		6		10

2. Null Hypothesis

There is no association between the variables of whether or not a student feels insecure and attending student events.

$$H_0: P_{i1} = P_{i2}$$

3. Fisher's Exact Test

$$p = .033, p < .05$$

Thus, the Fisher Exact value was significant enough to reject the null hypothesis and therefore it was concluded that commuting college students who describe themselves as being insecure are likely to attend student events.

Comparison of Students who have had Negative Experiences with other Students and Attendance at Campus Events

1. Contingency Table:

		Has had Negative Experiences with Other CNU Students			<i>Row Totals</i>	
		Yes		No		
Attends	Yes	I	0	I	6	I
	No	I	3	I	1	I
<i>Column Totals</i>			3		7	10

2. Null Hypothesis

There is no association between the variables of whether or not a student has had negative experiences with other students and attending campus events.

$$H_0: P_{i1} = P_{i2}$$

3. Fisher's Exact Test

$$p = .033, p < .05$$

Thus, the Fisher Exact value was significant enough to reject the null hypothesis, and therefore it was concluded that commuting college students who have had negative experiences with other students are unlikely to attend campus events.

Research Question 4

Are there institutional factors and conditions associated with college student involvement on a commuter campus?

Procedure for analysis: The data were read and a list of words (factors and conditions) students used to describe the University was compiled. The data were read again and a list of student experiences and perceptions regarding student involvement was created. Utilizing the first list (institutional factors and conditions) as reference categories, a descriptive matrix was created. A summary of that matrix, organized by positive and negative associations, is presented below.

Results: Although there was not enough data to quantify the answer to the question: Are there institutional factors and conditions associated with college student involvement on a commuter campus, the students did provide some insight into this question.

Positive Associations:

- * having facilities available where students can spend time when they are not in class
- * an institutional culture which supports student-centered faculty members
- * an institutional culture which encourages interaction in the classroom
- * the availability of special interest organizations and activities

- * the local nature of the student body (i.e., when students attended college with high school friends, they supported one another in participating in events)
- * the availability of a variety of activities
- * smallness of the institution (helps facilitate a friendlier environment - i.e., faces become familiar quickly - which in turn facilitates involvement)
- * student culture that values study groups and asking upperclassmen for academic advice
- * diversity of student body (helps students feel comfortable as a member of the community quicker)
- * the presence of curriculum clubs (students viewed them as more purposeful and not age bound)
- * the presence of athletic teams and fraternities and sororities (traditional forms of college life)
- * New Student Orientation program
- * small faculty to student ratio
- * some departments require (others strongly encourage) participation in campus events/activities

Negative Associations:

- * faculty don't take attendance (students go to class with one another and don't even know each other's names)
- * commuter institution (makes it more challenging to meet students since many come to class and then leave)
- * diversity of student body (some younger students feel out of place in evening classes that have a lot of older students in them)
- * lack of an orientation program for students who matriculate in January
- * institutional reputation supports the notion that there is not a "rich college life" at a commuter institution

Research Question 5

What are college students' perceptions regarding the opportunity for student involvement? If it is believed to be limited, is the limitation believed to be self-imposed or institutionally imposed?

Procedure for analysis: To examine this question a reference chart was created. The components of the chart included: a description of the students' perceptions regarding the opportunity for involvement; whether or not

the opportunity for involvement was believed to be limited; if the opportunity for involvement was limited, was the limitation believed to be self-imposed or institutionally imposed; and finally, any other descriptions regarding the opportunity for involvement. Based on this reference chart, a narrative description is presented below.

Results: When asked how Christopher Newport University students exhibit involvement, all of the students could cite examples. Those examples included: membership in social fraternities and sororities; participating in curriculum clubs; taking advantage of student services; showing school spirit by wearing Christopher Newport clothing; participating in sports and intramurals; caring about the school - voicing an opinion about what is going on; reading and writing into the student newspaper; having conversations with other students, faculty and staff in the Campus Center; attending athletic events; attending campus events; utilizing the recreational facilities; and "hanging out" with friends on campus. Thus, based on this listing, one may deduce that commuter students believe that an opportunity for student involvement exists at Christopher Newport University. In fact, one minimally involved student put it this way:

"...I see things out there all the time, there's stuff to do and...I think well I could do this if I

had the time. I really don't. So I don't think it's a problem of enticing. I just think...people are aware of what's going on, but they choose not to go for whatever reasons they have. I don't see that as a problem of trying to get other people into - involved in programs. Most people are aware of extra programs. That's one good thing I can say...there are definitely a lot of extra-curricular programs here at Christopher Newport if you want to be involved and have the time to do it."

This student not only indicated that opportunity for involvement existed, but that limitations upon that involvement were believed to be imposed by the students themselves. Indeed, as indicated in the narrative provided in response to the first research question, the students who participated in the qualitative component of this study believed the University offered many diverse and interesting opportunities for involvement in out-of-class activities. In fact, many of the involved students said that making a comitment to participate in just one activity often resulted in a "snowball effect". The more people one meets, the more expansive the involvement opportunities become.

Interestingly, of the five students who were minimally involved in the college experience, as measured by the CSEQ, four of them indicated that although they were satisfied with their level of involvement, there were areas in which they had wished they had gotten involved (e.g., curriculum clubs, basketball team), or had volunteered to help start new program (women's network). For the student who said she would like to help start a

women's network, she also indicated that she thought that once she decided on a major, the college part of her life would probably become more of a focus and thus she would probably become involved. One of the older students felt that everyone should join a curriculum club but that a lot of the other clubs were for the younger students. The one student who did not discuss wanting to get more involved was the minimally involved student who had participated in approximately 15 theatre productions.

Finally, it is worth noting that some students offered theories as to why many students did not choose to get involved at Christopher Newport. They primarily attributed lack of involvement to four factors:

- * age - college life tends not to be the focus for the older college student;
- * work - because so many of the students work, they simply do not have time for student life;
- * personality - the student was too insecure to pursue involvement; and
- * lack of traditional signs of college life - since students did not see traditional signs of college life, such as fraternity houses and football games, they did not view the offered opportunities as worthwhile.

Thus, although it may be clear that some students, for whatever reason, choose not to take full advantage of the opportunities available to them on a commuter college campus, it is not as clear as to whether or not the institution is also limiting the involvement opportunities. Although the choice to take advantage of the college environment is ultimately in control of the student, reviewing the lists of institutional factors and conditions the students associated with college student involvement on a commuter campus, one discovers that the institution plays an important role. More important than expanding facilities and programs seems to be the need for the institutional culture to focus more on supporting the role of the faculty as student-centered and encouraging interaction in the classroom. At a minimum, one student suggests asking the faculty to take attendance so the students can at least know the names of the other students. The University could also develop a January Orientation program. Finally, a component of institutional culture which appears to be present, but could be further developed, concerns the relationships among the people at the University (student, faculty, and administrators and administrative offices). In other words, the ratings on the three CSEQ environmental scales tended to range from neutral to favorable. An institutional culture embracing

the importance of student relationships would, according to the students in the study, enhance involvement.

Research Question 6

How are commuter students who are minimally involved in the college experience utilizing their time? Are they involved in educationally related activities outside the campus? Do they feel part of the campus community?

Procedure for analysis: This question was examined in three parts. First, to examine how commuter students who are minimally involved in the college experience are utilizing their time, the time monitors of the low involved students were examined. Categories were created by clustering activities and frequencies were compiled both individually and for the group overall. Interview transcripts were then read to examine whether or not general consistency existed between how the students said they spent their time and what they later recorded. An analysis of the time monitors is presented below.

To examine the second part of this question - are they involved in educationally related activities outside the community? - the activities recorded on the time monitors and those discussed during the interviews were placed individually on index cards. This process resulted in a total of 45 index cards. Ten people (five students,

three administrators, one person not associated with the University, and the researcher) were independently asked to sort the index cards into two piles: on campus activities or off-campus activities. All ten sorters agreed on the on campus or off campus designation on 31 of the 45 cards. Thus, this yielded a rater reliability coefficient of .69. Nine of the ten sorters (90%) agreed on the on campus or off campus designation on 42 of the 45 cards, yielding a rater reliability coefficient of .93.

The same ten people were then given the cards again and independently asked to sort them into these two piles: educationally related activities or not educationally related activities. All ten people agreed on whether or not the 45 activities were educationally related on 13 of the 45 cards, yielding a rater reliability coefficient of .29. Nine people (90%) agreed on this sort for 25 of the 45 cards, yielding a rater reliability coefficient of .56; whereas eight of the ten people (80%) agreed on 34 of the 45 cards, resulting in a rater reliability coefficient of .76. Finally, seven of the ten sorters (70%) agreed on 36 of the 45 cards resulting in a rater reliability coefficient of .80. Thus, using a 90% agreement rate for determining which activities are considered to be on or off campus, and 70% agreement rate for determining whether or not the activities are educationally related, a

contingency table was created and frequencies, percentages and a Fisher's Exact Test were computed.

Finally, to answer the final question - do they feel part of the campus community - satisfaction indexes from the CSEQ were examined and a reference chart plotting descriptors of feelings about their experiences, taken from the interview transcripts and critical incident exercise, was created.

Results: Students who were minimally involved in the college experience, as measured by the CSEQ, were spending their time on the following activities: sleeping, commuting to and from Christopher Newport, personal hygiene (e.g., shower, dress, eat), free time (e.g., watching TV, talking on the telephone), reading the newspaper, housework/chores/errands, exercising, spending time with friends on campus, utilizing Career Services at Christopher Newport, eating lunch on campus, studying in the library, studying at home, working on their resume, studying for the CPA exam, attending class, attending meetings, going to the doctor for a physical, studying the Bible/praying, using the practice rooms (voice and instrumental) on campus, preparing for church, attending church, practicing music (trumpet, organ, singing), working on a computer, working at an off-campus job, and visiting with a professor.

These activities were reported by four students who recorded their activities for a two week period. The activities they recorded were highly congruent with how they said they spent their time during individual interviews. Based on 336 hours of recorded activity (1344 hours for the group), examined in 15 minute intervals, an analysis of that time is as follows:

Sleeping. As a group, the four students spent 34% of their time sleeping (1,802 15 minute segments). Stewart slept the most (39% of his time or 528 intervals), while William slept the least (29% of his time or 386 intervals). Mary slept 32% of her time (430 intervals) and Arlene slept 34% of her time (458 intervals). This activity was coded as an off-campus, non-educational activity.

Commuting to and from CNU. The students spent 3% of their time (142 15 minute intervals) commuting. William, who commutes from Williamsburg, spent the most time commuting (5% or 70 intervals), while Stewart, who was enrolled in one class, spent the least time commuting (less than 1% or 4 intervals). Arlene spent 3% (40 intervals) of her time commuting and Mary spent 2% of her time commuting (28 intervals). Like sleeping, this activity was also considered to be an off-campus, non-educational activity.

Personal Hygiene. Five percent of the students' time (286 15 minute intervals) was spent on personal hygiene. Mary spent the most time on personal hygiene (7% or 95 intervals), while Arlene spent the least (3% or 48 intervals). William spent 4% (59 intervals) and Stewart spent 6% (84 intervals) of their time on personal hygiene. Again, this activity was considered to be an off-campus, non-educational activity.

Free Time. Nineteen percent (1.043 intervals) of the students' time was spent on a variety of leisure activities. Arlene had the most free time (35% or 471 intervals) , while William had the least (7% or 99 intervals). Stewart reported that 12% (160 intervals) of his time was leisurely and Mary reported 23% (313 intervals). This time was considered to be spent off campus and as a non-educational activity.

Reading the Newspaper. Two students spent time reading the newspaper. Thus the total time spent by the group on this activity was less than 1% (38 intervals). Both students spent 1% of their time on this activity. For Arlene, that percentage point was based on 20 15 minute intervals while for Mary it consisted of 18 15 minute intervals. This activity was considered to be educational and taking place off-campus.

Chores. Three students spent their time on chores. Total group time dedicated to this activity was 7% (354

intervals). Mary spent the most time on chores (20% - 274 intervals), while William spent the least (2% or 24 intervals). Arlene spent 4% of her time on chores (56 intervals). This activity was considered to be an off-campus, non-educational activity.

Exercise. Two students exercised. Total time spent on exercise by the group was 1% (59 intervals). Mary spent 3% of her time exercising (45 intervals) while Arlene dedicated 1% of her time towards exercise (14 intervals). Exercise was considered to be an off-campus, non-educational activity.

Spend time with friends at CNU. Although two students spent time with their friends at Christopher Newport, it was a negligible amount: less than 1% for the group (5 intervals); less than 1% for Arlene (1 interval); and less than 1% for William (4 intervals). This activity was coded as on campus, non-educational.

Career Services. Arlene, a senior, spent two and one half hours with Career and Counseling Services at Christopher Newport. She was the only student who utilized this service during the two week time monitor study. Thus the time spent on this activity was less than 1% (10 intervals). The activity was considered to be both on campus and educational.

Lunch On Campus. Two students, Arlene and William, ate lunch on campus. Again the time devoted to this

activity was negligible: less than 1% for the group (13 intervals); less than 1% for Arlene (10 intervals); and less than 1% for William (3 intervals). Eating lunch on campus was coded as an on-campus, non-educational activity.

Study in the Library. 4% of the students' time was spent studying in the library (199 intervals). William spent the most time there (8% or 111 intervals), while Mary spent the least amount of time in the library (1% or 19 intervals). In addition, 5% of Arlene's time was spent in the library (69 intervals). Studying in the library was considered to be both educational and an on-campus activity.

Study at home. 235 intervals, or 4%, of the time monitored was spent studying at home. Stewart studied at home the most (9% or 124 intervals); while both Arlene and Mary spent about 4% of their time studying at home (53 intervals for Arlene; 58 intervals for Mary). Although off-campus, this activity was considered to be educational.

Resume. Arlene spent about two hours (8 intervals) working on her resume at home. This activity calculated at both less than 1% of time for the group as well as for herself and was considered an off-campus, educational activity.

CPA Exam. Arlene also spent two hours (8 intervals) studying for the CPA exam at home. Just like working on her resume, this activity statistically took up less than 1% of group time as well as less than 1% of her time. Also like working on her resume, it was considered to be an off-campus, educational activity.

Attend class. All four students attended class during the two week period. The time students spent in class overall was 4% (214 intervals). Time spent in class for each student was as follows: William - 5% or 74 intervals; Arlene - 5% or 66 intervals; Mary - 4% or 56 intervals; Stewart - 1% or 18 intervals. Attending class was considered to occur on campus and to be educational.

Meeting. Arlene went to a meeting one evening. She gave an hour and a half of her time to this activity (less than 1% or 6 intervals). Since she provided no further information about the meeting it was coded as off campus and not educational.

Physical. Arlene also spent the same amount of time have a physical for school (less than 1% or 6 intervals). Similar to the meeting she attended, this activity was considered to be off campus and not educational.

Bible Study. William, who's father is the Pastor of a church, spent a lot of time reading the Bible and praying. This activity (148 intervals) contributed to 3% of the group time and 11% of his time. The activity was coded as

occurring off campus. However, 50% of the coders said it was educational and 50% said it was not.

Piano. William spent two hours and 15 minutes playing a piano on campus. This activity involved 9 intervals and was calculated as contributing to both less than 1% of group time and of his time. It was considered to be an on-campus and educational activity.

Church Preparation. William used 67 intervals of his time preparing for church. This contributed to 1% of group time and 5% of his time. This activity was coded as off campus and non-educational.

Church. Two students attended church. This activity consisted of 124 intervals of time for the group (2%). The majority of the time spent on church (9% or 120 intervals) was done so by William, while Mary spent one hour in church (less than 1% or 4 intervals). Attending church was considered an off-campus, non-educational activity.

Music. William enjoys music. He spent 21 hours and 15 minutes (85 intervals) either playing the trumpet, the organ or singing. That activity included 2% of group time and 6% of his time. It was considered to occur off-campus and not an educational activity.

Computer. William is also a computer science major. During the two week period of time monitoring, he spent one hour and fifteen minutes (5 intervals and less than

1%) working on his computer at home. This was coded as an off-campus, educational activity.

Work. Two of the students worked off-campus. William, the computer science major, worked in a nursing home and spent 19 hours there during the two week period (76 intervals or 6% of his time). Stewart, on the other hand, spent 103 hours (412 intervals or 31% of his time) working in a retail store. Stewart is a part-time student majoring in music. Thus, working off campus counted as 9% of group time (488 intervals) and was identified as an off-campus, non-educational activity.

Miscellaneous. The remaining four activities that occurred during the two week time period were also considered to be negligible with regard to the overall time spent on them. All four activities counted as less than 1% of both group time and individual time. Those activities were as follows:

Mary spent one hour (4 intervals) in a professors office. This activity was coded as on-campus and educational.

William spent one hour (4 intervals) in the administration building. This activity was coded as on-campus and non-educational.

Stewart spent one and a half hours (6 intervals) having a voice lesson. This activity was considered on-campus and educational.

Stewart also spent two hours in an on-campus interview (8 intervals). 50% of the coders thought this was educational while the other 50% thought it was not.

Thus, based on two weeks of four students recording their activities, a portrait of how commuter students who are minimally involved in the college experience, as measured by the CSEQ, spend their time, is summarized in the following table:

Table 28
Activities Engaged in During a Two Week Period by Commuter
Students who Are Minimally Involved in the College
Experience
(Unit of Analysis = 15 minutes)

Activity	Group n (%)	<u>Students:</u>			
		1 n (%)	2 n (%)	3 n (%)	4 n (%)
*****On-Campus, Educational Activities*****					
Career Services	10 (0%)	10 (0%)	0 (0%)	0 (0%)	0 (0%)
Study in Library	199 (4%)	69 (5%)	111 (8%)	0 (0%)	19 (1%)
Class	214 (4%)	66 (5%)	74 (5%)	18 (1%)	56 (4%)
Play Piano	9 (0%)	0 (0%)	9 (0%)	0 (0%)	0 (0%)
Visit Professor	4 (0%)	0 (0%)	0 (0%)	0 (0%)	4 (0%)
Voice Lesson	6 (0%)	0 (0%)	0 (0%)	6 (0%)	0 (0%)
*****On-Campus, Non-Educational Activities*****					
Friends @ CNU	5 (0%)	1 (0%)	4 (0%)	0 (0%)	0 (0%)
Lunch @ CNU	13 (0%)	10 (0%)	3 (0%)	0 (0%)	0 (0%)
Administration Building	4 (0%)	0 (0%)	4 (0%)	0 (0%)	0 (0%)

*****Off-Campus, Educational Activities*****

Reading					
Newspaper	38 (0%)	20 (1%)	0 (0%)	0 (0%)	18 (1%)
Study @					
Home	235 (4%)	53 (4%)	0 (0%)	124 (9%)	58 (4%)
Resume	8 (0%)	8 (0%)	0 (0%)	0 (0%)	0 (0%)
CPA Exam	8 (0%)	8 (0%)	0 (0%)	0 (0%)	0 (0%)
Music	85 (2%)	0 (0%)	85 (6%)	0 (0%)	0 (0%)
Computer	5 (0%)	0 (0%)	5 (0%)	0 (0%)	0 (0%)

*****Off-Campus, Non-Educational Activities*****

Sleeping	1802 (34%)	458 (34%)	386 (29%)	528 (39%)	430 (32%)
Commuting	142 (3%)	40 (3%)	70 (5%)	4 (0%)	28 (2%)
Personal					
Hygiene	286 (5%)	48 (3%)	59 (4%)	84 (6%)	95 (7%)
Free Time	1043 (19%)	471 (35%)	99 (7%)	160 (12%)	313 (23%)
Chores	354 (7%)	56 (4%)	24 (2%)	0 (0%)	274 (20%)
Exercise	59 (1%)	14 (1%)	0 (0%)	0 (0%)	45 (3%)
Meeting	6 (0%)	6 (0%)	0 (0%)	0 (0%)	0 (0%)
Physical	6 (0%)	6 (0%)	0 (0%)	0 (0%)	0 (0%)
Prepare for					
Church	67 (1%)	0 (0%)	67 (5%)	0 (0%)	0 (0%)
Church	124 (2%)	0 (0%)	120 (9%)	0 (0%)	4 (0%)
Work	488 (9%)	0 (0%)	76 (6%)	412 (31%)	0 (0%)

*****On-Campus Activities*****

Interview	8 (0%)	0 (0%)	0 (0%)	8 (0%)	0 (0%)
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*****Off-Campus Activities*****

Bible					
Study	148 (3%)	0 (0%)	148 (11%)	0 (0%)	0 (0%)

Student 1 - Arlene
 Student 2 - William
 Student 3 - Stewart
 Student 4 - Mary

Thus, as a group, these minimally involved students spend most of their time sleeping, enjoying free time, and working. All of these activities were coded as not being educationally related and occurring off campus.

In addition to the activities recorded on the time monitors, students described other activities they

participated in during the interviews. Those activities, characterized as occurring either on campus or off, and as either educationally related or not, were as follows:

On-Campus, Educational Activities

Participates in CNU Theatre Productions
 Works on campus part time for Theatre Department
 Attends CNU Opera Workshops
 Participates in Study Groups
 Studies privately with a CNU professor (vocal training)
 Attends Campus Events (lectures, poetry reading)
 *Helped with the Summer Institute of the Arts program

On-Campus, Non-Educational Activities

Uses CNU recreational facilities (plays basketball)
 Attends CNU basketball game

Off-Campus, Educational Activities

No additional activities

Off-Campus, Non-Educational Activities

Socializes with faculty off-campus
 Planning a wedding

On-Campus, ? Educational Activities

Attends concerts on-campus (60% of the coders said this was educational, while 40% said it was not)
 Reads the student newspaper (40% of the coders said this was educational, while 60% said it was not)

Off-Campus, ? Educational Activities

Music major will spend summer singing at Busch Gardens as a lead male vocalist (50% of the coders said this was educational, while 50% said it was not)
 Volunteers at the Peninsula Fine Arts Center (40% of the coders said this was educational, while 60% said it was not)
 Church volunteer - Sunday school teacher and committee member (40% of the coders said this was educational and 60% said it was not)
 Choreographed a show for Newport News Parks and Recreation (40% of the coders said this was educational, while 60% said it was not)

* 4 coders thought this was an off-campus activity; it actually occurs on-campus but the coders were unaware of this event

Thus, to answer the question: are commuter students who are minimally involved in the college experience, as measured by the CSEQ, involved in educationally related activities outside the campus; the categories from both the preceding chart and lists were analyzed. The analysis did not include the eight activities (18%) that failed to achieve a minimum of .70 as a rater reliability coefficient. The results of the analysis are summarized in the chart below.

Table 29

Contingency Table for Location of Activities and Whether or not they are considered to be Educational for Commuter Students who are Minimally Involved in the College

	Experience			Row Totals
	Educational	Non-Educational		
On-Campus	I 13 (.68)	I 5 (.28)	I	18 (.49)
Off-Campus	I 6 (.32)	I 13 (.72)	I	19 (.51)
<i>Column Totals</i>	19	18		37

The Fisher's Exact Test calculated on this contingency table resulted in $p = .013$ ($p < .05$) and is therefore significant. Thus, these minimally involved commuter student are more likely to participate in educationally related activities while on campus, and non-educationally related activities while off campus. Thus, in response to this part of Research Question 6, commuter students who are minimally involved in the college experience tend not

to be involved in educationally related activities off campus.

In response to the final part of Research Question 6, do commuter students who are minimally involved in the college experience feel part of the campus community, the general consensus was yes, but to varying degrees. Three of the minimally involved commuter students responded (on the CSEQ) that they liked college, while the other two said they felt neutral about it. Four of the five students said if they had college to do over again they would probably attend Christopher Newport, while one student indicated that he would definitely attend Christopher Newport. Other comments students made, with reference to the overall college experience, included "I love it here" and "I would love to stay here."

The CSEQ also measured how the students felt about other students, faculty, and the administration. On a Likert Scale of 1 through 7, with 1 representing competitive, uninvolved, sense of alienation; and 7 representing friendly, supportive, sense of belonging; three of the five students positively rated their relationship with other students, student groups, and activities, 6. Two students felt more neutral, rating this scale 4. Their comments regarding other students included "the young students are great and have been very helpful"

and "I have met many friendly students here." One of the students who felt neutral (4/7) said that she "made a couple of good friends here," that she felt "comfortable here," but also that she "didn't fit in."

Similarly, the scale on the CSEQ measuring relationships with faculty members asked students again to assign a number 1 through 7, with 1 representing remote, discouraging, unsympathetic, and 7 representing approachable, helpful, understanding, encouraging. Three of the five minimally involved commuter students rated their relationships with faculty 5. These students commented that they "loved the professors" and that most of the faculty knew them by name. Another student rated his relationship with the faculty 6 and commented that he is on a first name basis with professors in the department of his major, that those faculty members have been his friends and mentors, and that many of them will be in his wedding this summer. The other student rated her relationship with the faculty 4, and commented that although she found most of them approachable, she was in general intimidated by them.

Finally, the CSEQ instructed students to rate their relationships with administrative personnel and offices, also on a 7 point Likert scale. On this scale 1 represented rigid, impersonal, bound by regulations, while 7 indicated that they were helpful, considerate, flexible.

These minimally involved commuting college students gave varied responses. Two of the students responded with a 2, and one of them stated that she felt the school "did nothing to make the students feel comfortable." Another student responded with 3, another 6, and finally one student with a 7.

With regard to the critical incident exercise, two of the five minimally involved commuter students said that they had never experienced an incident that made them feel proud to be a Christopher Newport student. The other three students discussed being nominated by a faculty member for an award, attending a homecoming basketball game and feeling good about the high academic reputation of the University.

Conversely, three of the five students said that they had never experienced an incident that made them feel uncomfortable to be a Christopher Newport student. Of the other two students, one described a negative experience with a professor, and the other felt uncomfortable in a night class with many older students.

Hypothesis 1

There are differences between highly involved commuter college students and commuter college students who are minimally involved in the college experience.

Procedure for analysis: This hypothesis is similar to the first research question in that they both require an examination and description of the overall college experience. The difference between the first research question and this hypothesis is that the hypothesis requires the analysis to differentiate the overall experiences between the high and low involved students. Thus, the procedure for analysis of this hypothesis involved utilizing the categories developed in the first research question. Two additional categories were added: comparison of the campus maps, and comparison of the time monitors. Therefore, based on revisiting the categories of the first research question, as well as the campus maps and time monitors of the students, differences and similarities of the high and low involved students were highlighted and are presented below.

Results: Through a comparison of high and low involved students, evidence exists to support the hypothesis that there are differences between highly involved commuter college students and commuter college students who are minimally involved in the college experience. Thus, that comparison is presented below. The text is organized by the categories delineated above; each category is subdivided into similarities and differences, and the evidence is presented in a bulleted format.

Use of Facilities - Similarities.

* The typical day for commuting students, regardless of involvement level, begins with a commute to the University.

* Most of the students tended to arrive on campus according to the time their first class was scheduled. Two students typically arrived early regardless of their schedule (one highly involved and one minimally involved) while another student (low involved) arrived early regularly depending on the class. That is, if he were enrolled in a music class he would plan on arriving early to prepare his voice and to compose himself.

* Time of departure from campus tended to rely upon whether or not there was some purpose for staying.

* Most students tended to know about and utilize Career Services. In utilizing Career Services, students could do so purposefully and individually.

Use of Facilities - Differences.

* Two students were enrolled in only one class. Both of those students were low involved students and did not remain on campus following class unless they had to use the library or take care of some administrative task.

* During class breaks, low involved students who remained on campus tended to go to the library and study (usually by themselves) while the highly involved students

tended to spend time in the Campus Center either "hanging out" or participating in campus or student activities.

* Three of the five low involved students had off-campus jobs which often required them to leave campus following class. One highly involved student also had an off-campus job, requiring her to leave campus as well. However, her job was on the border of campus and she also had a second job on campus. For this highly involved student, her on-campus and off-campus jobs were more accommodating than the jobs for the low involved students. In other words, similar to on-campus jobs, her off-campus job was located within walking distance and allowed her the flexibility of scheduling segments of work between class. She also expressed that it was easy to change her hours and to be excused from work.

* Two of the five highly involved students had on-campus jobs while the low involved students either worked off-campus or did not work at all. One exception was a low involved student who was a music and theatre major. He would periodically be hired to work temporary jobs for the theatre.

* Students who remained on-campus to participate in campus or student activities were all highly involved students with the exception of the one minimally involved student who majored in music and theatre and participated in many departmental productions.

* Three of the five low involved students preferred to study in the library because the environment was more productive than at home.

* Through their involvement in student organizations, highly involved students were more likely to participate in student development workshops offered by the University.

Personal Maps - Similarities.

* All of the maps included academic buildings and most included the library.

* Most of the maps included non-academic space such as the Campus Center and the Gym. (One student who smoked even indicated where the ashtrays were on campus.)

* Most of the maps showed the existence of either the student's car or parking space.

* Most of the maps included the presence of the administration building.

Personal Maps - Differences.

* Although all of the maps drawn by the students were different (some very detailed, others not; most filled the page; some were neater than others) no common theme emerged to differentiate highly involved college students from low involved college students. To illustrate this point the maps drawn by the middle student in the highly

involved group and the middle student in the minimally involved group (Cindy and William) are included below.

Figure - 3

Cindy's Map

Cindy is a highly involved student. Her map depicts use of both academic and non-academic space, as well as conveying a sense of sentimentality and connectedness.

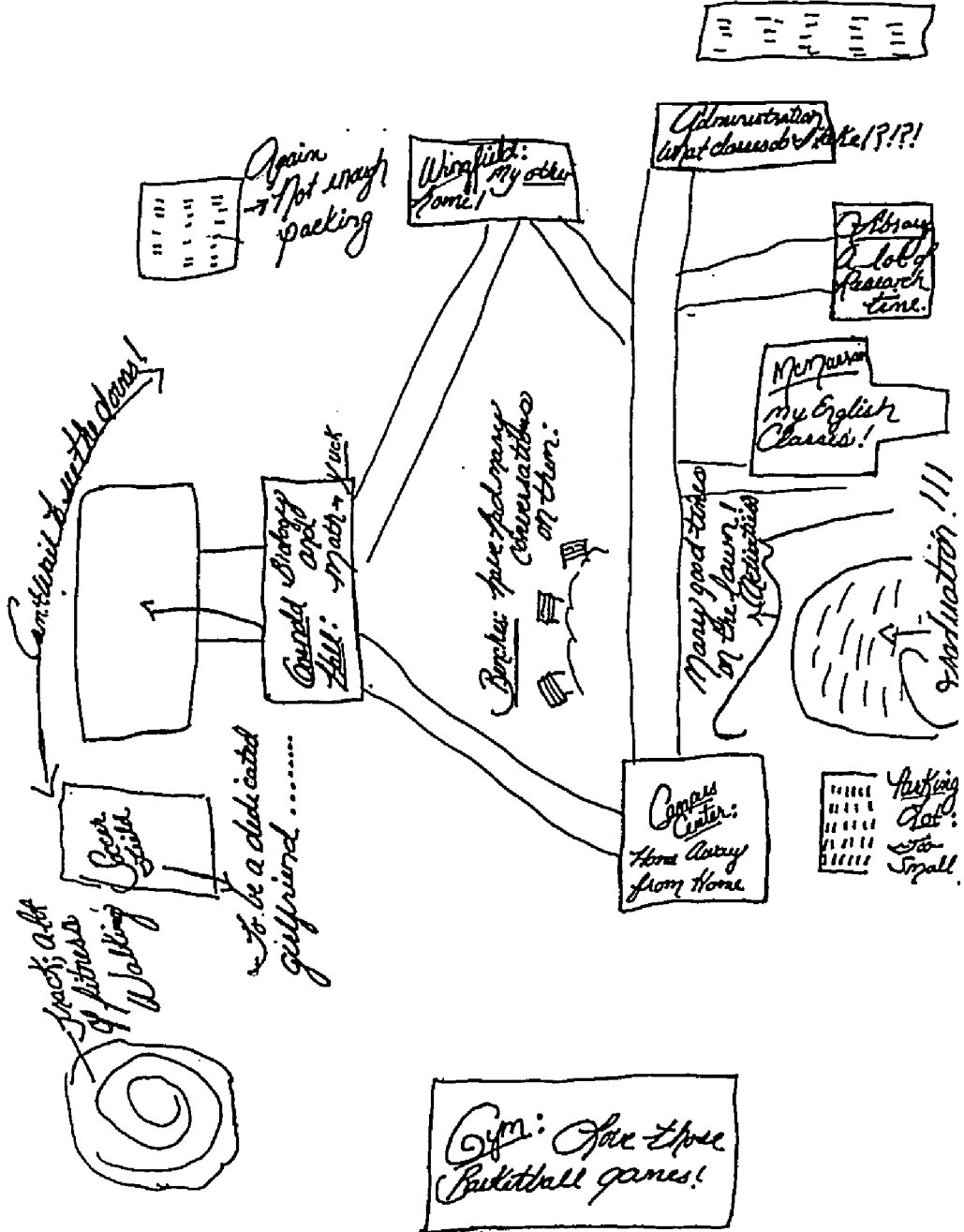
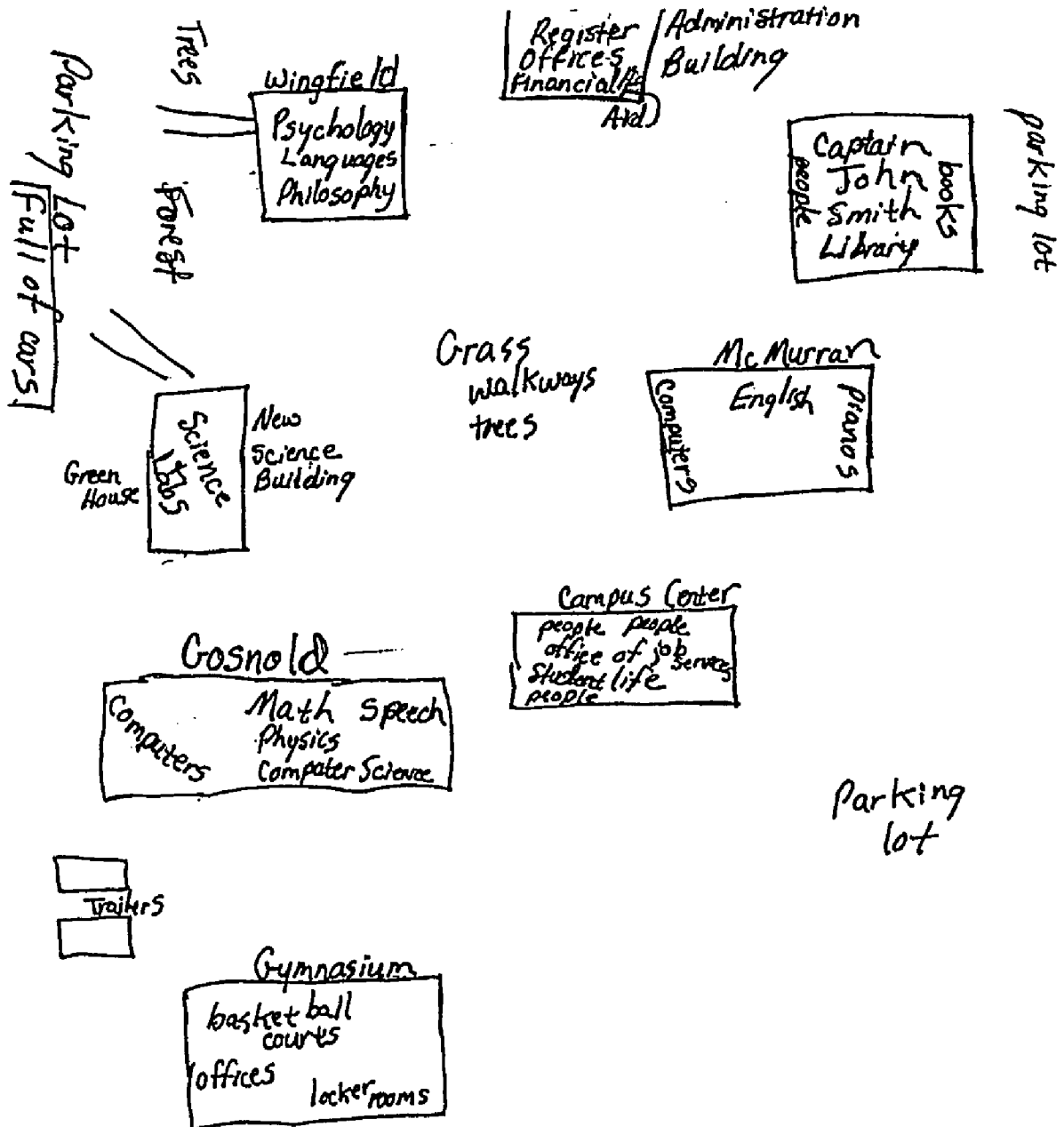


Figure - 4

William's Map

William is a low involved student. His map also depicts the use of both academic and non-academic space. Although William's map does not convey the same sense of sentimentality as Cindy's, there is a sense of familiarity with the campus. Notice however, that William's map does not depict any sidewalks or paths to connect the campus.



Career Development - Similarities.

* Most students felt that although college was not compulsory, one had to go if they wanted to get a "decent" job, a job with "some sort of esteem", or a job that had a challenge to it.

* Regardless of involvement level, students with specific career goals, such as teaching, recognized the fact that certification, or proper credentialing, was a prerequisite to entry to the field.

* The career aspirations of the students were varied. Some students had specific career plans and others had either no plan other than to be employed, or knew in general terms what field in which they hoped to be employed. Thus, clarity of ones future plans and involvement level did not appear to be related.

* Common among the Seniors, but not tied to involvement level, was the increase in utilization of Career Services. Seniors spent an increased amount of time researching graduate programs and obtaining assistance with their resumes and interview skills.

Career Development - Differences.

* Although not a distinct difference, low involved students were more likely than were highly involved students to know immediately upon matriculation what they wanted to major in. Such students were described by the participants in this study as being very focused.

Academics - Similarities.

* Most of the students viewed college as an opportunity to both enhance their career opportunities as well as become more aware of world events.

* The students tended to be very determined to persevere and complete their Bachelor's degree. All but one student said that if their education was interrupted they would eventually return to complete their degrees.

* When reflecting back upon their experiences when they began college, most students talked about fear.

* Most of the students described their overall academic experience as positive and believed they were getting a good education at Christopher Newport.

* Several students were impressed with the academic reputation of the University.

* What most students said they liked least about college, regardless of their involvement level, were exams. Although they wished exams could be eliminated, the students tended to believe they were a necessary evil in the world of academia.

* Older students in particular, regardless of their involvement level, had great anxiety and dislike for placement exams.

* Similarly, older students talked about feeling as though they did not know how to study and the difficulty

involved in learning to retain information relevant to the exams.

Academics - Differences.

* The highly involved students tended to have lower GPAs than did the minimally involved students. These high involved students discussed how their GPA was not reflective of the knowledge they had acquired and tended, as upperclassmen, to earn higher grades (including many "A's" and "B's").

* The highly involved students, however, were more likely to spend time discussing the process of discovering their intellectual selves and how they felt engaged in the educational process.

* The highly involved students were more likely to talk about learning time management in juggling their academic lives with the "rest of their lives".

Faculty - Similarities.

* All of the students found the faculty to be approachable, and in general, friendly and helpful.

* All of the students had spent time with a professor in his or her office. Some students stopped by to socialize with a popular professor; others had a specific purpose for the visit.

* Many of the students had at least one negative encounter with a professor. That negative encounter,

however, tended not to impact the overall experience for those students.

* The students understood that help was available from the faculty, but the help was to be student initiated.

* Most of the students preferred professors who initiated class interaction and used a lot of examples drawn from life experiences as opposed to lecturers who tend to focus more on "straight theory".

* Regardless of involvement level, students felt professors should treat all students fairly; respect the students - feel as if students mattered; be easy to talk to; be understanding; and be knowledgeable.

Faculty - Differences.

* The highly involved students tended to have stronger, more meaningful relations with faculty than did the low involved students.

* Highly involved students were more likely to describe their relationships with their professors as friendly.

* Some of the low involved students found that simply talking to a professor in his or her office helped the student feel more comfortable when in class.

Administration - Similarities.

* Overall the students found the administrators and administrative offices to be helpful and friendly.

* In general the students believed that registration could be handled better and that more parking was needed.

Administration - Differences.

* Low involved students had more complaints about administration of the University than did highly involved students (e.g tuition increases, departmental politics, the way librarians handled monitoring noise and communication regarding University policy).

* Highly involved students were more likely to have formed relationships with administrators or those who worked in an administrative/student service office than were minimally involved students.

Self-Understanding - Similarities

* All of the students had demonstrated some level of self-understanding throughout the interview process.

* Females, regardless of involvement level, were more likely than males to describe themselves as insecure.

Self-Understanding - Differences

* Students highly involved in the college experience were more likely to see themselves as leaders or change agents than were those students who were minimally involved in the college experience.

* Students minimally involved in the college experience tended to describe their experiences as being somewhat aloof or being primarily concerned with building their resumes.

* Highly involved students were more likely to see themselves as being very focused and determined.

* Highly involved students were more likely to see themselves as engaged in education and enjoying the intellectual process.

* Highly involved students were more likely than minimally involved students to describe themselves as outspoken, extraverted and friendly.

* Highly involved students were more likely to talk about how they appreciated the small college environment.

* Students minimally involved in the college experience were more likely to discuss the desire to become more involved (and that for a variety of reasons why that was difficult), while those highly involved in the college experience were more likely to discuss the conflict involved with learning to find the balance between their academic and social lives.

Family and Friends - Similarities

* Family and/or friends had some level of influence concerning the students' decision to attend college in general, and for some, Christopher Newport in particular.

* Making friends at Christopher Newport helped students feel more comfortable and more connected to the University.

* The level of family support varied among the students - no consistent pattern emerged with regard to involvement level.

* None of the students had children at home.

Family and Friends - Differences

* For those students that were highly involved in the college experience, they said that as they became involved their circle of friends expanded. Those new friends facilitated other involvement opportunities thus creating a "snowball effect".

* Low involved students were more likely to spend their free time with family and friends that were not Christopher Newport University students.

Peer Group - Similarities

* All of the students described their Christopher Newport peers as being very diverse in both age and life experiences.

* For older students, regardless of involvement level, knowing that many of the students attending Christopher Newport were also older helped them feel more comfortable.

* Most of the students had observed that many Christopher Newport University students worked.

* Most of the students tended to associate participation in student activities with both full-time student status and being younger.

* Most of the students described the student body as "somewhat involved".

* Regardless of their involvement level, most of the students felt the majority of their peers were more independent than students at other universities, that they took their education seriously and were involved in terms of the academic experience.

Peer Group - Differences

* Those students who were minimally involved in the college experience were more likely to say that it was difficult to meet other students and make friends than did students who were highly involved in the college experience.

* Students who said they had enjoyed the opportunity to engage in "a lot of interesting conversations" with other students, tended to score higher on the CSEQ.

Student Subcultures - Similarities

* Most of the students recognized the presence of fraternities and sororities at Christopher Newport University.

* Most of the students mentioned the presence of spectator sports at Christopher University as an avenue for student involvement.

* Most of the students discussed the importance of school spirit (college loyalty, caring about the school, supporting CNU or student activities) as a component of student involvement.

* All of the students recognized that a myriad of student activities was present as an opportunity for student involvement at Christopher Newport University.

* The students discussed the importance of college friendships, establishing a bond with one's peers, as an important component of the college experience. All of the students had experienced some level of peer interaction.

Student Subcultures - Differences

* Highly involved students were more likely to have been an active member of a student subculture (e.g., a fraternity) than were low involved students. Stewart, the music and theatre major, was an exception. William, by virtue of being African American, was also an exception, but the nature of his association with other African American students was limited.

* Highly involved students possessed more knowledge about the student subcultures at Christopher Newport University.

* The two students who were members of a social fraternity/sorority were both highly involved students.

Student Involvement in Out-of-Class Activities - Similarities.

* Most students viewed attending student and campus events as a form of involvement.

* The students believed that club membership was a form of involvement.

* The students believed showing some form of school spirit was an important element of being involved.

* Student interaction, "hanging out" on campus with one's friends was also an important element of involvement.

* Regardless of involvement level, every student had participated in at least one activity, one time.

* Almost every student read the student newspaper occasionally, while many read it frequently.

* Most of the students had had some interaction with the Office of Career and Counseling Services.

* Older students, regardless of involvement level, felt that curriculum clubs were most suited to their needs and would be a beneficial aspect of college life to participate in.

* The students believed that the University offered many diverse and interesting college involvement opportunities.

* The students believed it was okay for different people to have different levels of involvement.

Student Involvement in Out-of-Class Activities - Differences.

* All of the students who were highly involved in the college experience had participated in at least one structured activity (e.g., club membership or participation in a theatre production). Conversely, only one of the low involved students (Stewart) had participated in any structured activities.

* Most of the minimally involved college students expressed a desire to become involved in a club and felt they were "missing out" on part of their college experience.

* Students highly involved in the college experience believed their experiences in outside-of-the-classroom activities taught them how to balance their social and academic life and made college more rewarding and stimulating.

Commuting - Similarities.

* Most of the students said that they did not "know what it's like not to be a commuter student."

* The most common complaint about being a commuting student was the cost of gas and traffic.

* Students that were older and/or married, regardless of involvement level, pointed out that commuting was their only viable option if they were to pursue a higher education.

Commuting - Differences.

* Although there were some differences in how students described the commuter experience, no common theme emerged to differentiate highly involved college students from those minimally involved in the college experience.

Time Monitors - Similarities.

* As groups, both highly involved and minimally involved students spent 34% of their time sleeping.

* Free time constituted the second most frequent activity for both groups: 20% for highly involved students; 19% for minimally involved students.

* Both highly involved students, and those minimally involved in the college experience, spent 5% of their time on personal hygiene.

Time Monitors - Differences.

* Highly involved commuting college students spent 23% of their time on-campus, while minimally involved students spent only 9% of their time on campus.

* Highly involved students spent twice as much time (8%) in class, as compared to those students minimally involved in the college experience (4%). This may reflect the fact that twice as many high involved students (4) were enrolled full time than were minimally involved students (2).

* Highly Involved students spent more time studying at home (6%) as compared to those students minimally involved in the college experience (4%).

* Highly involved students spent slightly more time (4%) commuting to and from the campus. The average commuting time for those minimally involved in the college experience was 3%.

* Highly involved students spent 3% of their time "hanging out" in the campus center. Time dedicated to this activity by minimally involved students was negligible.

* Other on-campus activities engaged in by highly involved students included participation in student organizations (2%), studying on-campus (1%), and eating lunch on-campus (1%). In comparison, minimally involved students spent 4% of their time studying on-campus but no significant amount of time in either of the other two activities.

* None of the minimally involved students were employed on campus, whereas two of the highly involved

students were. On average, 5% of the time of highly involved students was dedicated to on-campus employment.

* Conversely, two minimally involved students were employed off campus. The average amount of time dedicated to this activity was 9%. One highly involved student was also employed off campus. Her job was on the border of campus and she was able to leave for class and return to work. Average off-campus work time for highly involved students was 4%.

* On average chores consumed 7% of the time of minimally involved commuting college students, while chores consumed only 2% of the time of highly involved commuting college students.

Satisfaction - Similarities.

* Overall the students were satisfied with the University and described Christopher Newport as a "good school."

* Most of the students described their experiences with the University as positive and satisfying.

* Most of the students had never thought about transferring. Of those who did think about transferring, none of them actually did transfer because they had determined they were satisfied at Christopher Newport or the other school was not within their financial means.

Satisfaction - Differences.

* Only two of ten students felt neutral about college, and both of those students were minimally involved in the college experience.

Institutional History - Similarities.

* For all of the students, elements of institutional history influenced their decision to attend the University. Those elements included: being a local university with a strong academic reputation; having a relatively small faculty to student ratio; its historical affiliation with the College of William and Mary; having a small and friendly environment; and having a diverse student body.

* The students spoke positively about the future of the University and supported the decision to build residence halls and to pursue graduate programs.

Institutional History - Differences.

* No common theme emerged to differentiate highly involved college students from those minimally involved in the college experience, with regard to the category of institutional history.

Hypothesis 2

A college student subculture epitomizing the collegiate way exists within a commuter campus.

Procedure for analysis: To begin to analyze this hypothesis, the literature was revisited to ascertain an operational definition of the "collegiate way." In identifying such a definition, it became important to examine both historical and modern elements. Based on these elements a content analysis of the interview transcripts was performed. Since the second interview focused more specifically on the notion of student involvement, and since one student withdrew from the study at that point, total sample size for the purpose of investigating this hypothesis was 9.

Results: In referencing the Encyclopedia of Higher Education, one finds that the collegiate way refers to "student life associated with undergraduate studies in a residential setting and with a student body relatively homogeneous in composition" (Thelin, 1992, p.1713). Within such a setting, central features of student life developed: "hazing and rushing, fraternities and football, class loyalty, college loyalty, and all the other 'old traditions' celebrated in later alumni reminiscences" (Moffatt, 1989, p.29). Changes to the university structure (e.g., an increase in commuting students as well as in the diversity of the student body) along with a very influential youth culture and the changing functionality of higher education (e.g., one could no longer drift through college as a "gentleman C" and still end up with

an offer to join a top law firm) reshaped the collegiate ideal (Moffatt, 1989).

According to Moffatt (1989), by the late twentieth century, college life centered around "an understanding among the students about the proper relationship between work and play in college, about the relative value of inside-the-classroom education versus extracurricular fun" (p.29). Although the emphasis on the formal extracurriculum has shifted, college life is still an important component of the undergraduate experience. The students in Moffatt's ethnographic study of undergraduate life (1989), indicated that "academic work and friendly fun were, or ought to be, about equally important activities during one's undergraduate years" (p.33). Thus, college is a well balanced mixture of academics and social activities (formal and informal), and students in college who were deviating from such a balance almost always knew that they were (Moffatt, 1989).

Therefore, key elements of the collegiate way, which were historically associated with a residential setting and with a relatively homogeneous student body included fraternities and sororities, spectator sports, school spirit (college loyalty), student activities, and college friends. Given the fact that Christopher Newport University is not residential and has a diverse student body, this hypothesis focused on whether traditional forms

of student life, or the collegiate way, still develop. Based on a content analysis of interview transcripts, the students in this study indicated the following:

* Eight out of 9 students (89%) mentioned the presence of fraternities and sororities at Christopher Newport University when discussing either their own involvement or student involvement overall.

* Seven out of 9 students (78%) mentioned the presence of spectator sports at Christopher Newport University as an avenue for student involvement.

* Eight out of 9 students (89%) discussed the importance of school spirit (college loyalty, caring about the school, supporting CNU or student activities) as a component of their own involvement or of student involvement overall.

* All 9 students (100%) mentioned that a myriad of student activities existed at Christopher Newport University and served as opportunities for student involvement.

* All 9 students (100%) had participated at some level of peer interaction; 8 of the 9 (89%) students talked a lot about college friendships as an important component of student involvement - the other student's discussion regarding college friendships supported this notion inversely (e.g., she talked about feelings of isolation and difficulty in making friends; due to the

lack of college friends, the tendency to participate in off-campus activities with non-college friends; and that when she attends William and Mary football games with such non-college friends, she observes the special bonds among the alumni and feels students miss out on that at CNU).

Thus, through content analysis, evidence exist that to some extent a college student subculture epitomizing the collegiate way exists within a commuter campus.

Finally, it should be noted that the content analysis also indicated that more recent student definitions of campus life (i.e., those used by the students in Moffatt's 1989 study of undergraduate student life) were further articulated and hence supported by the students in this study. In other words, more than half of the students independently discussed college involvement as an important part of one's education, utilizing words such as "being well rounded", "getting the most out of your education", and "social learning".

Hypothesis 3

Time monitoring inventories will indicate that less involved students do have time available for involvement.

Procedure for analysis: A content analysis was conducted on the time monitors of the four students who

completed them, in the low involved group. The unit of analysis was time intervals of fifteen minutes. The results are presented below.

Results: A thorough description of the analysis of the time monitors for minimally involved commuter college students was presented earlier in response to research question 5. The table presented in that section, summarizing the data, is duplicated here:

Table 28

Activities Engaged in During a Two Week Period by Commuter Students who Are Minimally Involved in the College Experience
(Unit of Analysis = 15 minutes)

Activity	Group n (%)	Students:			
		1 n (%)	2 n (%)	3 n (%)	4 n (%)
*****On-Campus, Educational Activities*****					
Career Services	10 (0%)	10 (0%)	0 (0%)	0 (0%)	0 (0%)
Study in Library	199 (4%)	69 (5%)	111 (8%)	0 (0%)	19 (1%)
Class	214 (4%)	66 (5%)	74 (5%)	18 (1%)	56 (4%)
Play Piano	9 (0%)	0 (0%)	9 (0%)	0 (0%)	0 (0%)
Visit Professor	4 (0%)	0 (0%)	0 (0%)	0 (0%)	4 (0%)
Voice Lesson	6 (0%)	0 (0%)	0 (0%)	6 (0%)	0 (0%)
*****On-Campus, Non-Educational Activities*****					
Friends @ CNU	5 (0%)	1 (0%)	4 (0%)	0 (0%)	0 (0%)
Lunch @ CNU	13 (0%)	10 (0%)	3 (0%)	0 (0%)	0 (0%)
Administration Building	4 (0%)	0 (0%)	4 (0%)	0 (0%)	0 (0%)

*****Off-Campus, Educational Activities*****

Reading Newspaper	38 (0%)	20 (1%)	0 (0%)	0 (0%)	18 (1%)
Study @ Home	235 (4%)	53 (4%)	0 (0%)	124 (9%)	58 (4%)
Resume	8 (0%)	8 (0%)	0 (0%)	0 (0%)	0 (0%)
CPA Exam	8 (0%)	8 (0%)	0 (0%)	0 (0%)	0 (0%)
Music	85 (2%)	0 (0%)	85 (6%)	0 (0%)	0 (0%)
Computer	5 (0%)	0 (0%)	5 (0%)	0 (0%)	0 (0%)

*****Off-Campus, Non-Educational Activities*****

Sleeping	1802 (34%)	458 (34%)	386 (29%)	528 (39%)	430 (32%)
Commuting	142 (3%)	40 (3%)	70 (5%)	4 (0%)	28 (2%)
Personal Hygiene	286 (5%)	48 (3%)	59 (4%)	84 (6%)	95 (7%)
Free Time	1043 (19%)	471 (35%)	99 (7%)	160 (12%)	313 (23%)
Chores	354 (7%)	56 (4%)	24 (2%)	0 (0%)	274 (20%)
Exercise	59 (1%)	14 (1%)	0 (0%)	0 (0%)	45 (3%)
Meeting	6 (0%)	6 (0%)	0 (0%)	0 (0%)	0 (0%)
Physical	6 (0%)	6 (0%)	0 (0%)	0 (0%)	0 (0%)
Prepare for Church	67 (1%)	0 (0%)	67 (5%)	0 (0%)	0 (0%)
Church Work	124 (2%)	0 (0%)	120 (9%)	0 (0%)	4 (0%)
	488 (9%)	0 (0%)	76 (6%)	412 (31%)	0 (0%)

*****On-Campus Activities*****

Interview	8 (0%)	0 (0%)	0 (0%)	8 (0%)	0 (0%)
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*****Off-Campus Activities*****

Bible Study	148 (3%)	0 (0%)	148 (11%)	0 (0%)	0 (0%)
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Student 1 - Arlene
 Student 2 - William
 Student 3 - Stewart
 Student 4 - Mary

Thus, as a group, these minimally involved students spend most of their time sleeping, enjoying free time, and working. Since on average 19% of the minimally involved students' time was designated as "free time", this hypothesis was supported. Therefore it was concluded that students who are minimally involved in the college experience, as measured by the CSEQ, probably do have time

available which could be dedicated to putting forth more effort toward the college experience.

Hypothesis 4

When asked to describe their college experiences, highly involved students will be more comprehensive and will use a broader definition of involvement, while those students less involved will utilize a more restrictive definition of involvement, will have a more restrictive relationship with professors, and will be less aware of student services and involvement opportunities.

Procedure for analysis: First, responses regarding definitions and descriptions of college student involvement were categorized as having been given by either a highly involved student or a low involved student. This same process was then applied to responses regarding: descriptions of relationships with faculty; descriptions of experiences with, and knowledge of, student services; and the opportunity for involvement at Christopher Newport. Each category was then examined to determine if enough evidence existed to draw conclusions. Presented below is an examination of each category followed by a summary.

Results: To test the hypothesis, four categories were created and tested: definitions of involvement, faculty

relations, student services and knowledge of involvement opportunities.

Definitions of Involvement. Based on the students' definitions of students involvement a list of key elements was developed. Those key elements are listed in the following chart. Upon compiling a list of key elements, the number of students who included those elements in their definitions and descriptions of involvement were counted. The results of that process are summarized in Table 30.

Table 30

Number of High and Low Involved Students Utilizing Key
Elements of Involvement When Describing and Defining
College Student Experiences

Element	# Students With High CSEQ Scores (n=5)	# Students With Low CSEQ Scores (n=4)
Getting the most out of your education/ becoming well rounded	2	0
Organizing events	2	1
Attending events	3	4
Being a member of a club	5	4
Representing CNU at an Off-Campus Event	1	0
School Spirit	4	4
"Hangout" with CNU Friends On-Campus	5	3
"Being into your Academics"	2	1
Participating in Study Groups	1	1
Utilizing CNU Recreational Facilities	2	1
Voicing an Opinion about "What's Happening"	1	0
Attending SGA Town Meetings	1	0
Reading the Student Newspaper	1	0
Wearing CNU Clothing	1	0
Utilizing Student Services	1	0

Thus, as a group, the high involved students offered 7 (47%) more elements of involvement than did the low involved students. Although the low involved students did demonstrate some breadth in their answers it was unequal (less than) to that expressed by the highly involved students. Therefore, of the nine students who participated in this study, those with high CSEQ scores seemed to be more comprehensive and seemed to use broader definitions of involvement when asked to discuss college student involvement.

Faculty Relations. Characterizations of the students' relationships with faculty, as described by high and low involved students were compiled. The number of students who used those characterizations were counted. The results of that process are summarized in Table 31.

Table 31

Characterizations of Faculty Relationships as Described by
High and Low Involved Students

Characterization	# Students With High CSEQ Scores (n=5)	# Students With Low CSEQ Scores (n=4)
Mean score from CSEQ	5.80	5.00
Most professors know student by name	3	2
Often stop by faculty office to visit	3	1
Only stop by faculty office if there's a purpose	1	3
Have socialized with faculty off-campus	2	1
Describes relationship as sociable	4	1
Describes relationship as not close	1	2
Is intimidated by most	0	1
Most are approachable	5	4
Have had at least one negative encounter with	3	3
Refers to some as mentors	0	1
Overall, has had positive experiences	4	3
Faculty have had a great impact on education	3	1

Thus, as indicated by Table 31, the high group tends to have stronger faculty relationships than does the low

group, but the difference between the two groups does not appear to be great. All of the highly involved students found the faculty to be approachable, and as a group their most common experiences included friendly relationships and overall positive experiences. Similarly, all of the low involved students found the faculty to be approachable, however, as a group their most common experiences included stopping by a faculty member's office only if there was a purpose, having had at least one negative encounter with a professor, and yet still describing their overall experiences with faculty as positive. In fact, in applying a Fisher's Exact Test on each characteristic in Table 30, one discovers that none of relationship characteristics, as compared to high and low CSEQ scores, yielded significant results. Therefore, the results of the examination of the relationship between how students with high CSEQ scores and low CSEQ scores describe their relationship with their professors are inconclusive.

It is worth noting that with regard to this topic in particular (and with regard to overall experiences in general), one of the highly involved students (Ernest) tended to share experiences more common to the low involved group. Conversely, one of the low involved students (Stewart) tended to share experiences more common to the high involved group. Although the presence of these

students as "outliers" is discussed further in Chapter Six, it is interesting to note that without these two students, or with the reverse of their answers, the difference in faculty relationships between low and high involved students would illustrate more of a contrast.

Student Services. It was very difficult to examine the relationship between involvement level and awareness of students services due to the lack of an operational definition. Several of the students asked for clarification of what was meant by student services. It was difficult to present clarification since an operational definition had not been determined in advance. One could have simply identified those services organized under the Vice President for Student Services; one could identify all services available to the students when they are not in class - regardless of reporting lines; or one could turn to a professional association such as the Council for the Advancement of Standards and Guidelines for Students Services. Yet exploration of all three of these options would have resulted in different functional areas being identified as student services. Thus, since this question resulted in confusion, and ultimately in leading responses, and since the leading of responses were not uniform, it was concluded that the data did not yield enough evidence to draw any substantiative conclusions.

Involvement Opportunities. Based on Table 29

(Elements Utilized by High and Low Involved Students when Describing and Defining College Student Involvement), the evidence presented in response to Research Question 4, and the activities the students said they participated in as presented in Research Question 2, one may conclude that students with a low CSEQ are aware of involvement opportunities. In other words, the low involved students identified 8 (versus 15 by high involved students) ways to become involved (Table 29); each of the five non-involved students had either indicated a desire to be involved in a particular activity, or in Stewart's case had been very involved (Research Question 4); and as a group they had participated in 6 out of the 15 activities examined in Research Question 2. Thus, although these low involved students were less aware of involvement than the high involved students, the difference in their awareness does not appear to be staggering.

Summary of Analysis of Hypothesis 4: When asked to describe their college experiences, highly involved students will be more comprehensive and will use a broader definition of involvement, while those students less involved will utilize a more restrictive definition of involvement, will have a more restrictive relationship with professors, and will be less aware of student services and involvement opportunities. It was reasoned

that highly involved students were more comprehensive and did use a broader definition of involvement than did low involved students. The data regarding faculty relations and awareness of student services yielded little insight. Finally, the difference in student awareness regarding opportunities for involvement were somewhat inconclusive. Thus, although this hypothesis was not intended to be a statistical hypothesis, in reviewing the qualitative data relevant to this hypothesis, the amount of confidence that one can attribute to any of these findings appears to be somewhat limited.

CHAPTER 6
CONCLUSIONS

This chapter presents a summary of the research problem and method, an interpretation of the findings, limitations of the study, and implications. It concludes with suggestions for future research.

Summary of Research Problem and Method

This study was an exploratory attempt to provide a better understanding of the involvement of commuting college students. Writers have criticized the literature on college student involvement as being biased, starting from the premise that the residential experience is the normative one, and have called for a reexamination of the concept of college student involvement. Thus, in response to that need, this study was designed to explore and describe the concept of student involvement from commuter college students' perspectives.

Prior research on commuter college students indicates that when one compares a residential student experience to a commuter experience, college students who live on campus are more likely to experience increases in aesthetic, cultural, and intellectual values; liberalization of

social, political, and religious values and attitudes; increases in self-concept, intellectual orientation, autonomy, and independence; gains in tolerance, empathy, and ability to relate to others; stay in college and graduate (Pascarella and Terenzini, 1991). Where does this leave the commuter college student?

Based on review of the pertinent research and literature, and focused on both Astin's theory of student involvement and Pace's work on quality of effort, it was hypothesized that there were differences between highly involved commuter college students and commuter college students who were minimally involved in the college experience. It was further proposed that understanding these differences would assist both college students and institutions in fostering student involvement among commuter college students. Answers to one research question, six subsidiary research questions and nine subsidiary hypotheses were sought.

Thus, in an attempt to answer the research questions and to test the hypotheses, the current study examined the involvement of commuter students at a four year institution through a case study approach. Since student involvement has both quantitative and qualitative features, the study explored the concept of college student involvement from the college student's perspective by utilizing both research methods. The study began by

utilizing a quantitative method. This portion of the study involved the use of the College Student Experiences Questionnaire (CSEQ). This instrument not only provided a snapshot of student involvement but also identified highly involved and minimally involved college students who served as the sample frame for the qualitative portion of the study.

The overall population studied consisted of commuting students at metropolitan institutions of higher education in the United States. The sample frame was college students at Christopher Newport University; a four year non-residential state supported metropolitan institution with an enrollment of approximately 5000 students. Since seniors are often more focused on bringing closure to their collegiate experiences as they prepare to leave the institution, and freshmen may still be immersed in an acculturation stage, sophomores and juniors were selected for study. Likewise, since transfer students may not be fully acculturated at Christopher Newport University, and typically bring with them a set of issues associated with why they transferred, transfer students were eliminated from the subject pool. Thus, the sample consisted of 98 currently enrolled sophomores and juniors whose entire college experience was at Christopher Newport. The sample was stratified to represent eight categories as depicted below:

	<u>Age < 26</u>				<u>Age >= 26</u>				
Part Time	I	Male	I	Female	I	Male	I	Female	I
	I		I		I		I		I
Full Time	I	Male	I	Female	I	Male	I	Female	I
	I		I		I		I		I

A verification process of all eight lists resulted in the reduction of an eligible 892 currently enrolled students meeting the criteria to 627 students. Sixty-six percent of those students were full-time and younger than 26. Thus the final subject pool (122 students) resulted from random sampling of the full-time and younger than 26 categories and inclusion of all other students who met the remaining category criteria.

The CSEQ was mailed to the subject pool and a final response rate of 80% (n=98) was attained. Based on the research questions and hypotheses, statistical analyses of the CSEQ data were performed using chi square tests of association, independent t-tests, Pearson Correlation Coefficients and analysis of variance. The preselected alpha level was .05.

After quantitative analysis of the instrument was performed, those college students who represented extreme cases of college student involvement, as measured by the sum of quality of effort scores, were asked to participate in the qualitative component of this study. Thus the most extreme five scores at each end of the quality of effort

distribution, of those agreeing to participate, constituted the sample (n=10). At both ends of the distribution, eight students had to be contacted to achieve the goal of five participants. Since the subject of this study involved the interplay of attitudes, values, beliefs and assumptions of the subjects, data collection consisted of a triangulation of qualitative methods. More specifically, this study employed the use of field notes, semi-structured interviews, focus groups and self-administered questionnaires.

Following the execution of the qualitative procedures, analyses of the data were performed using a series of matrix displays, content analysis, counting, noting themes, clustering, narration, and where applicable, Fisher's Exact Test and rater reliability coefficients were calculated.

Analysis of the data established both quantitatively and qualitatively that there are differences between highly involved commuter college students and commuter college students who are minimally involved in the college experience. A depiction of the nature of college student experiences at a commuter institution emerged. Therefore, results of this study supported the original key hypothesis. The hypothesis predicted that there are differences between highly involved commuter college students and commuter college students who are minimally

involved in the college experience. In response to the principal research question, the results also provided information concerning the nature of those experiences.

Not all of the hypotheses were supported, however, and as expected in exploratory research, the insight provided into the research questions was limited in scope. A summary of the findings of this study follows. Those findings not only supported the key hypothesis in regard to the existence of a variance of commuter student experiences, but the findings also clearly challenge the notion that commuting students, by virtue of their commuting status, are not getting full value for their investment in higher education. The findings further support the premise that the commuter student experience needs to be much more thoroughly studied and described on its own terms.

Summary and Interpretation of Findings

Research Question

What is the nature of college student involvement on a commuter campus?

Summary of Findings: From a quantitative perspective, the College Student Experiences Questionnaire began to offer some insight into this question. Beginning with the distribution of the students' quality of effort scores, one found a multimodal distribution with a median of 238,

a mean of 245.73 and a standard deviation of 46.29. The minimum score was 150 and the maximum was 370, thus, the range = 220. The distribution was therefore slightly skewed to the right. Thus the distribution illustrated a variance in the distribution of quality of effort scores among commuting college students.

Since the literature indicates that commuting is negatively correlated with involvement (Astin, 1993), the quality of effort scores of Christopher Newport University students were compared to the normative data collected at other comprehensive colleges and universities, provided by the Center for the Study of Evaluation at the University of California - Los Angeles. Independent T-tests were computed to test for statistical significance. The results of the analysis on the quality of effort scales indicated that Christopher Newport University students put forth more effort toward science, demonstrated no difference in their quality of effort toward library activities, and put forth less effort in all other areas (i.e. experiences with faculty; course learning; art, music, theatre; student union; athletic and recreation facilities; clubs and organizations; experiences in writing; personal experiences; student acquaintances; topics of conversation; and information in conversation).

However, in comparing Christopher Newport University students to students at other comprehensive colleges and

universities with regard to their level of satisfaction, an independent t-test indicated that there was no difference in satisfaction. Finally, a comparison of the students on Pace's environmental scales indicated that Christopher Newport University students were similar to students at other comprehensive colleges and university with regard to their ratings of the college environment on scholarly qualities, esthetic qualities, critical skills, vocational competence, practical values, relationships with faculty, and relationships with administrators and administrative offices. However, Christopher Newport students rated relationships with other students lower than did students at other comprehensive universities.

Overall, then, Christopher Newport students exert less effort toward their college experiences (except in utilizing the library and in science activities) but are equally satisfied with their experiences and rate the environment the same as do students at other comprehensive colleges and universities. The exception is the students' rating of their relationships with other students.

This exception (student relationship rating) is a significant finding in that according to the highly involved commuter students in the qualitative study, peer encouragement often facilitated their involvement.

From a qualitative perspective, emerging themes regarding the nature of college student involvement on a commuter campus, were as follows:

Use of Facilities:

- * Most of the students tended to arrive on campus according to the time their first class was scheduled. Exceptions to this theme were noted.
- * Time of departure from campus tended to rely upon whether or not there was some purpose for staying.
- * All students tended to know about and utilize Career Services. In utilizing Career Services, students could do so purposefully and individually.

Personal Maps:

- * All of the students included academic buildings when drawing a map of how they experienced the University. In addition, most students included the library.
- * Most maps included non-academic space such as the Campus Center and Gym.
- * Most of the maps showed the existence of either the student's car or parking space.
- * Most of the maps included the presence of the administration building.

Career Development:

- * Most of the students felt that although college was not compulsory, one had to attend if they wanted to get a "decent" job, a job with "some sort of esteem", or a job that had a challenge to it.
- * Students with specific career goals, such as teaching, recognized the fact that certification, or proper credentialing, was a prerequisite to entry to the field.
- * The career aspirations of the students were varied. Some students had specific career plans and others had either no plan other than to be employed, or knew in general terms what field in which they hoped to be employed. Thus, clarity of ones future plans and involvement level did not appear to be related.

- * Common among the Seniors was an increase in utilization of Career Services.

Academics:

- * Most of the students viewed college as an opportunity to both enhance their career opportunities as well as become more aware of world events.
- * The students tended to be very determined to persevere and complete their Bachelor's degree. All but one student said that if their education was interrupted they would eventually return to complete their degrees.
- * When reflecting back upon their experiences when they began college, most students talked about fear.
- * Most of the students described their overall academic experience as positive and believed they were getting a good education at Christopher Newport.
- * Several students were impressed with the academic reputation of the University.
- * What most students said they liked least about college were exams. Although they wished exams could be eliminated, the students tended to believe they were a necessary evil in the world of academia.
- * Older students in particular, regardless of their involvement level, had great anxiety and dislike for placement exams.
- * Older students talked about feeling as though they did not know how to study and the difficulty involved in learning to retain information relevant to the exams.

Faculty:

- * All of the students found the faculty to be approachable, and in general, friendly and helpful.
- * All of the students had spent time with a professor in his or her office. Some students stopped by to socialize with a popular professor, others had a specific purpose for the visit.

- * Many of the students had at least one negative encounter with a professor. That negative encounter, however, tended not to negatively impact the overall experience for those students.
- * The students understood that help was available from the faculty, but the help was to be student initiated.
- * Most of the students preferred professors who initiated class interaction and used a lot of examples drawn from life experiences as opposed to lecturers who tended to focus more on "straight theory."
- * Students felt it was important for professors to treat all students fairly; respect the student - feel as if students mattered; be easy to talk to; be understanding; be knowledgeable.

Administration:

- * Overall, the students found the administrators and administrative offices to be helpful and friendly.
- * In general, the students believed that registration could be handled better and that more parking was needed.

Self Understanding:

- * All of the students demonstrated some level of self-understanding throughout the data collection process.
- * Females were more likely than males to describe themselves as insecure.

Family and Friends:

- * Family and/or friends had some level of influence concerning the students' decision to attend college in general, and for some, Christopher Newport in particular.
- * Making friends at Christopher Newport helped students feel more comfortable and more connected to the University.
- * The level of family support varied among the students.
- * None of the students in this phase of the study had children at home.

Peer Group:

- * All of the students described their Christopher Newport peers as being very diverse in both age and life experiences.
- * For older students, the presence of other older students on campus helped them feel more comfortable.
- * Most of the students had observed that many Christopher Newport University students worked.
- * Most of the students tended to associate participation in student activities with both full-time student status and being younger.
- * Most of the students described the student body as "somewhat involved".
- * Regardless of their involvement level, most of the students felt the majority of their peers were more independent than students at other universities, that they took their education seriously and were involved in terms of the academic experience.

Student Subcultures:

- * Three predominant subcultures within the dominant student subculture included African American students, college insiders (a fading group), and social fraternities and sororities.
- * Although there was no evidence of overt racism, there appeared to be much separatism amongst the students. Students expressed interest in collaboration and perhaps more co-sponsorship with predominantly White and Black student organizations.
- * Some effort was being made to increase communication and understanding about cultural and ethnic difference among students.
- * Most of the students mentioned the presence of spectator sports at Christopher Newport as an avenue for student involvement.
- * Most of the students discussed the importance of school spirit (college loyalty, caring about the school, supporting CNU or student activities) as a component of student involvement.

- * All of the students recognized that a myriad of student activities were present as an opportunity for student involvement at Christopher Newport University.
- * The students discussed the importance of college friendships, establishing a bond with ones peers, as an important component of the college experience. All of the students had experienced some level of peer interaction.

Student Involvement in Out-of-Class Activities:

- * Most of the students viewed attending student and campus events as a form of involvement. Sixty-seven percent of the students had done so.
- * The students believed club membership was a form of involvement. Fifty-six percent of the student were members of a student club.
- * The students believed showing some form of school spirit was an important element of being involved.
- * Student interaction, "hanging out" on campus with one's friends, was also an important element of involvement. All of the students had engaged in some level of peer interaction; 67% of the students said they "hung out" on campus.
- * Every student had participated in at least one activity, one time.
- * Almost every student read the student newspaper occasionally, while many read it frequently.
- * Most of the students had had some interaction with the Office of Career and Counseling Services.
- * Older students felt that curriculum clubs were most suited to their needs and that it would be beneficial to participate in them.
- * The students believed that the University offered many diverse and interesting college involvement opportunities.
- * The students believed that it was okay for different people to have different levels of involvement.

Commuting:

- * Most of the students said they did not "know what it's like not to be a commuter student."

- * Some of the younger students pointed out that the commuter experience was better suited for their personality since they did not have the self-discipline to be a resident student. Such students would then give examples of people they knew who went away to college and "flunked out" due to "partying too much."
- * The most common complaint about being a commuter student was the cost of gas and traffic.
- * Students that were older and/or married pointed out that commuting was their only viable option if they were to pursue higher education.

Time Monitors:

- * As groups, both highly involved and minimally involved students spent 34% of their time sleeping.
- * Free time constituted the second most frequent activity for both groups: 20% for highly involved students; 19% for minimally involved students.
- * Both highly involved students, and those minimally involved in the college experience, spent 5% of their time on personal hygiene.

Satisfaction:

- * Overall the students were satisfied with their college experiences and described Christopher Newport as a good school."
- * Most of the students described their experiences with the University as positive and satisfying.
- * Most of the students never thought about transferring. Of those who did think about transferring, none of them actually did transfer because they had determined they were satisfied at Christopher Newport or that the other school was not within their financial means.

Institutional History:

- * For all of the students, elements of institutional history influenced their decision to attend the University. Those elements included: being a local university with a strong academic reputation; having a relatively small faculty to student ratio; its historical affiliation with the College of William and Mary; having a small and friendly environment; and having a diverse student body.

- * The students spoke positively about the future of the University and supported the decision to build residence halls and to pursue graduate programs.

Thus, Christopher Newport University appears to be a commuter institution with a variance in the distribution of its students' level of involvement. This finding is not fully consistent with the literature which portrays commuter students as being minimally involved in the college experience.

Interpretations: Most noteworthy about the answer to this research question was how the Christopher Newport students compared to students at other comprehensive colleges and universities, the low rating of Christopher Newport students' peer relationships, and the breadth and depth of the experiences portrayed by the commuting students who participated in the qualitative component of the study. The fact that commuting students did demonstrate both breadth and depth of college experiences, provides a new perspective not yet portrayed in the literature. This, however, was not the only new ground which exploration of this question uncovered.

To begin, Christopher Newport students did have overall lower quality of effort scores as compared to students at other comprehensive colleges and universities. This finding is consistent with the literature in that commuting and involvement have been proven to be negatively correlated (Astin, 1993).

However, Pace (1988) indicates that differences in mean scores on the quality of effort scales of 1.00 or more are always statistically significant, but that such relatively small differences are probably of little practical importance. In fact, Pace (1988) has utilized mean score differences of 3.00 or greater to indicate difference. Both the non-significance of the library scales and the positive significance of science activities, for Christopher Newport students, were within a 2.99 range (no difference). It should be noted that although the difference in quality of effort with regard to science activities was not practically significant, its statistical significance might reflect the fact that Christopher Newport is located in an area with many pockets of scientific industries (e.g. NASA, CEBAF, and many military bases). Perhaps having parents employed in a scientific industry influences one's interest and quality of effort in science activities. It is also very conceivable that a portion of the older students who are matriculated at Christopher Newport are themselves employed by such communities.

Under Pace's operational definition of quality of effort difference, Christopher Newport students were similar to students at other comprehensive colleges and universities on seven of the 13 scales. Interestingly, all six scales, with which the students did not put forth an

equal or greater amount of effort, were related to activities associated with peer relationships (student union, athletic and recreation facilities, clubs and organizations, personal experiences, student acquaintances, and topics of conversation).

Christopher Newport students were equally satisfied with their overall college experience, and rated the environment comparable to students at other comprehensive colleges and universities. This further contradicts the literature in that commuting and satisfaction have also been negatively correlated: "The more commuting the student does, the less satisfaction he or she reports in all areas except facilities" (Astin, 1993, p. 390). In fact, the Christopher Newport student with the highest quality of effort score, who was also very enthusiastic about college, commuted more than 30 minutes one way.

Clearly supported by the literature, however, was the finding that students gave a low rating to their relationships with other students. According to Astin (1993), "the student's peer group is the single most potent source of influence on growth and development during the undergraduate years" (P. 398). This sentiment was often expressed by the students in the qualitative portion of the study. The students believed that peer interaction was an important component of involvement and further, highly involved students mentioned peer influence

as a key in facilitating their involvement. Some of the minimally involved students talked about the difficulty in making friends. Thus, this research supported the observation that it is more difficult for commuting students to form friends with other college students. It may be possible, however, to better facilitate those relations. Thus, peer friendships appear to be an important key to the issue of student involvement and the commuter student. However, one should be cautious in interpreting this conclusion given the fact that a significant, negative correlation was found between GPA and self-estimated gains in the area of personal/social development. Perhaps then peer relationships need to be fostered but in constructive ways. In other words, this data may suggest that student involvement, and the benefits associated with student involvement, may be enhanced for the commuter college student through the facilitation of **constructive** peer relationships. For example, it is presumably more beneficial to facilitate peer relationships through the use of study groups, or by encouraging students to participate in curriculum clubs, than it would be to encourage the formation of a beer drinking club, or for a student to be encouraged to be president of several clubs at once.

Since, according to prior research, commuting and involvement are negatively correlated (Astin, 1993), the

scores for Christopher Newport Students on the CSEQ may support Pascarella and Terenzini's (1991) supposition that the inequities with regard to the involvement of resident and commuting students may simply reflect the fact that a residential setting is better able to facilitate peer relationships, which in turn, promotes college student involvement. In other words, it is easier for students who live on campus to get to know one another. Perhaps this is because the expectation to form friendships is higher when one lives on campus or that developing a sense of familiarity with other residents reduces the risk in approaching one's peers. Or perhaps it is the presence of a resident staff, whose goal is to build community which facilitates peer friendships. Whatever the reason, it appears that if a commuter institution could focus more on helping students get to know one another in constructive ways, then the inequities between commuting and resident students, with regard to involvement levels, might become more balanced.

This would be consistent with Pace's (1988) assertion that quality of effort depends upon what one does, not merely upon where one lives. It is consistent with the variance of experiences described by the students in the qualitative study. Thus, some commuting students clearly put forth a significant amount of effort toward their college experience, in spite of the fact they were

commuters. In contrast, other commuter students did not put forth much effort. Perhaps then, the involvement of commuting students is more complex than is currently portrayed in the literature.

Subsidiary Research Questions

What are the profiles of highly involved commuter college students? How do they compare to commuter college students who are minimally involved?

Summary of Findings: Based on a quantitative analysis of the quality of effort distribution, it was determined that students highly involved in the college experience were likely to be younger than 26 and enrolled full time, while those minimally involved in the college experience were more likely to be 26 years of age and older, and enrolled part-time. Since there was no significant relationship between gender and involvement level, both men and women were highly involved.

The qualitative profiles were consistent with the statistical prediction regarding gender. Two men were among the highly involved students and three among the minimally involved students. Conversely, three women were among the highly involved students and two among the minimally involved. In terms of age, one highly involved student was older than 26, while two minimally involved student were older than 26. Other comparisons included:

- * Married: 2 highly involved; 2 minimally involved
- * Race:
 - Caucasian - 3 highly involved;
4 minimally involved
 - African American - 1 highly involved
1 minimally involved
 - Mexican - 1 highly involved
0 minimally involved
- * Dependent: 2 highly involved; 3 minimally involved
- * Commutes greater than 30 minutes one way:
3 highly involved; 1 minimally involved
- * Full time: 4 highly involved; 3 minimally involved
- * Employed on-campus: 2 highly involved; 0 minimally involved
- * Employed off-campus: 2 highly involved; 3 minimally involved
- * First generation: 1 highly involved; 5 minimally involved

Utilizing a Fisher's Exact Test, these comparisons were tested for statistical significance. The results of those tests indicated that the characteristics of highly involved commuting college students yielded the following profile: generally younger than 26 years of age, enrolled full time, and not a first generation college student.

Interpretations: Most noteworthy with regard to the answer to this subsidiary research question were the statistically significant characteristics: students highly involved in the commuter college experience tended to be younger than 26, enrolled full time, and not a first generation college students. Since the foundation of both student involvement theory and quality of effort rely upon

time as a precondition for involvement, it was not surprising that students who were enrolled full time were more involved in the college experience than those who were enrolled part time.

Although it is no surprise to find younger students more involved, there is insufficient research to thoroughly discuss and understand the involvement experiences of the older student (Pascarella and Terenzini, 1991). Several students in the qualitative study indicated that they believed most of the students who were involved were also enrolled full time and were younger than 26 years of age. The students indicated that they believed a lot of college life was for the younger student. Interestingly, however, the older students did see utility in the curriculum clubs. This will be discussed further in the subsection on implications.

Astin (1993) also seemed to support the suggestion that involvement opportunities were more focused upon the younger students. He reminds us that the British "college" served as the prototype for undergraduate education in the United States. This collegiate ideal, centered on a residential setting, close student-student and student-faculty relations, smallness, and a sense of tradition, has not only survived and retained a powerful sense of nostalgia for over 250 years, but it has also been proven to be effective. Thus, this useful model for the

facilitation of both education and community, according to Astin (1993), practically dictates a homogeneous student body; presumably, one of full-time students younger than 26 years of age. The influx of part-time and older students makes building that community more challenging. Perhaps then, the challenge of facilitating involvement is most easily met for those predisposed to being involved: students attending college full time who are younger than 26 years of age. This doesn't mean, however, that resources should not be used to facilitate the involvement of other students. Indeed, the student with the highest CSEQ score in this study was a nontraditional student. Furthermore, nontraditional students who were minimally involved in the college experience indicated a desire to become more involved. If universities truly believe in the benefits of college student involvement, then this finding may simply indicate the need for more creativity, and a shift in how universities perceive the needs of those students who tend to present more of a challenge when it comes to encouraging and supporting their involvement: students who are attending college part time and who are 26 years of age or older.

The finding with regard to first generation students -- first generation students were more likely to be minimally involved in the college experience -- may simply indicate a need for more attention to these students as

well as their parents. Although there appears to be a minimum amount of information in the existing literature on the involvement of first generation commuting college students, it is generally assumed that they are less sophisticated in understanding and manipulating the college environment. Parents who have not attended college may not understand the importance of college student involvement and may even view participation in some activities, such as attending events or participation in clubs, as frivolous. This may especially impact commuter students who live at home and whose time may be more closely monitored by parents. Thus, facilitating involvement for first generation commuting students may involve outreach efforts toward both the students and, for the traditionally aged, the parent.

Finally, in discussing the profiles of highly involved and minimally involved students, it is worth mentioning that some of the profiles of those students who participated in the qualitative component of the study did not make sense. Two students in particular, one highly involved and one minimally involved, stood out.

Ernest, who had a quality of effort score of 329 (highly involved) did not "appear" to be highly involved at all. His GPA was very low (1.84), he was involved with only one formalized activity, he described the environment as harsh, his relationships with faculty seemed distant,

he was not at all engaged in the academic experience, and he did not seem to take advantage of many of the involvement opportunities available to him. Perhaps his acceptance into the fraternity, or the mere fact that he (unlike other high school friends) had an opportunity to pursue higher education created a halo effect with regard to how he rated his experiences on the CSEQ. Perhaps he wasn't honest when responding to the CSEQ. Perhaps the forces of "marginality" and "mattering" need to be further examined in reference to student involvement and quality of effort.

The other student, Stewart, had a low quality of effort score of 181. He met his fiance in dance class, was very involved in the theatre and music department, and described many of his professors as his mentors. In fact, one will be a groomsman in his wedding, while another professor will sing. How can a student who has such close relations with faculty and who has been in about 15 CNU theatre productions be minimally involved? Stewart seemed to indicate that those special faculty friendships and his involvement in theatre were a separate part of his life -- separate from what he considers college. Does the discrepancy in Stewart's CSEQ score and what he described in the interview represent a need for a shift in the way we define and interpret student involvement? Or is he just simply an "outlier" or rare extreme? What does it mean

that out of five highly involved students and five minimally involved students, two profiles tended to "shout" they were in the wrong category according to current definitions of involvement? Perhaps this is another category for future research.

Do commuter college students exert less effort toward the college experience than resident college students?

Summary of Findings: Through an examination of the normative data provided by the Center for the Study of Evaluation at the University of California - Los Angeles, Christopher Newport students were compared to students at other comprehensive colleges and universities. A comparison of the quality of effort scores, as measure by the CSEQ, indicated that students at Christopher Newport University put forth more effort toward science, demonstrated no difference in their quality of effort toward library activities, and put forth less effort in all other areas.

It should be noted that 57% of the students attending the comprehensive colleges and universities included in the normative data lived on campus. Furthermore, in comparing the summary of means on the quality of effort scales between comprehensive colleges and universities, and those of selective liberal arts colleges (95% residential), all means for students from the selective

liberal arts colleges were higher than those for the students from the comprehensive colleges and universities, indicating even greater difference for Christopher Newport students. Again, the exception was for the quality of effort scale regarding science activities, which was slightly lower for students from selective liberal arts colleges than for students from comprehensive colleges and universities, again demonstrating greater difference. Thus, there is some indication that Christopher Newport students put forth slightly more quality of effort toward science activities, as compared to resident students, however exert less effort toward all other areas of the college experience.

Interpretations: It is most important to begin by stating that this study did not adequately address this question. However, a couple of points are worth making. First, the evidence is very clear that it is much more challenging to affect student change at a commuter institution than it is at a residential institution. Second, Pace (1988) indicates that research with the CSEQ, comparing resident and commuting students, has demonstrated that living on campus has had some influence on students' quality of effort, but that that is not the whole picture. When examining quality of effort scores of residential students, one discovers that some students

have very high scores, while others have very low scores. In other words, some students, even though they lived on campus, took little advantage of it. Conversely, as discussed in the interpretations of the findings of this study in the first research question, some commuter students, despite the fact they commuted, took great advantage of the myriad of opportunities afforded them. Thus, again, evidence supports the notion that where one lives may not be the sole determinant of the quality of one's college experience.

Are commuter college students with certain characteristics and experiences more likely to participate in some activities and not others?

Summary of Findings: Utilizing an unordered meta-matrix, 45 student characteristics and experiences were tested to determine whether or not an association existed with any of the 15 activities in which students participated. Thus, utilizing the Fisher's Exact Test, 720 statistical analyses were performed. Of the 720 tests, only three associations were found to be significant. Those associations were:

- * First generation commuting college students are not likely to attend student events.
- * Commuting college students who describe themselves as insecure are likely to attend student events.

- * Commuting college students who have had negative experiences with other students are unlikely to attend campus events.

Interpretations: The middle finding (insecure students will attend student events) does not make much sense, and may not be relevant in practical terms. The first and third findings however, do make sense and have been discussed in the interpretations of previous research questions.

Thus, for the purpose of interpreting this research question, it suffices to say that a recurring theme throughout the data (quantitative and qualitative) was the importance of constructive peer relationships. If students were better able to facilitate relations with other students, many benefits may be gained, including both preventing the deterrence of students from attending campus events (third finding) and encouraging first generation commuting college students to attend student events (first finding). It should be noted that the 717 insignificant tests may simply indicate sampling error or a problem with sampling validity. Thus, based on a stratified sample of 10, both the significant and insignificant findings should be interpreted as somewhat inconclusive.

* *Are there institutional factors and conditions associated with college student involvement on a commuter campus?*

A descriptive matrix indicated that the students perceived both positive and negative institutional factors and conditions were associated with college student involvement on a commuter campus. Those associations were:

Positive Associations:

- * having facilities available where students can spend time when they are not in class
- * an institutional culture which supports student-centered faculty members
- * an institutional culture which encourages interaction in the classroom
- * the availability of special interest organizations and activities
- * the local nature of the students body (i.e., when students attended college with high school friends, they supported one another in participating in events)
- * the availability of a variety of activities
- * smallness of the institution (helps facilitate a friendlier environment - i.e., faces become familiar quickly - which in turn facilitates involvement)
- * student culture that values study groups and asking upperclassmen for academic advice
- * diversity of student body (helps students feel comfortable as a member of the community quicker)
- * the presence of curriculum clubs (students viewed them as more purposeful and not age bound)

- * the presence of athletic teams and fraternities and sororities (traditional forms of college life)
- * new student orientation program
- * small faculty to student ratio
- * some departments require (others strongly encourage) participation in campus events/activities

Negative Associations:

- * faculty do not take attendance (students go to class with one another and don't even know each other's names)
- * commuter institution (makes it more challenging to meet students since many come to class and then leave)
- * diversity of student body (some younger students feel out of place in evening classes that have a lot of older students in them)
- * lack of an orientation program for students who matriculate in January
- * institutional reputation supports the notion that there is not a "rich college life" at a commuter institution

Thus, from the students' point of view, institutional factors and conditions can both enhance and impede college student involvement.

Interpretations: Pace would definitely concur with the students that institutional factors and conditions can both enhance and impede college student involvement. In fact, Pace (1988) reminds us that despite the evidence of the importance of college student initiative, one should not conclude that what the college does is of minor influence. He believes that education requires a

commitment from both the student and the institution. There is an evident connection between college students' quality of effort and the quality of facilities and opportunities that make that effort worthwhile.

Not only were the students perceptive with regard to the important influence of the University in the question of involvement, but many of the associations they identified were also supported in the literature as having important implications: smallness of the institution and peer tutoring (Pascarella & Terenzini, 1991); student-centered faculty members, a more involving pedagogy and learning-centered faculty (Astin, 1993; Kuh, Schuh, Whitt & Associates, 1991); facilities, student activities, peer relationships (Astin, 1993; Kuh, Schuh, Whitt & Associates, 1991; Pace, 1988; Pascarella & Terenzini, 1991); new student orientation (Kuh, Schuh, Whitt & Associates, 1991; Pascarella & Terenzini, 1991); reasonable student to faculty ratio (Astin, 1993). These associations will be discussed further in the subsection on implications.

What are commuter college students' perceptions regarding the opportunity for student involvement? If it is believed that opportunity is limited, is the limitation believed to be self-imposed or institutionally imposed (e.g. lack of facilities or programs)?

Summary of Findings: To provide some insight into this question a reference chart of students' perceptions regarding the opportunity for involvement was created. Based on the reference chart, a narration was presented. Highlights of that narration included:

- * When asked how Christopher Newport University students exhibit involvement, all of the students could cite examples (approximately 11 different activities). Based on the listing, and additional affirmations from the students, it was deduced that an opportunity for student involvement existed at Christopher Newport University.
- * The students perceived that limitations upon student involvement were imposed by the students themselves.
- * Many of the involved students believed that often the result of making a commitment to participate in just one activity, was a "snowball effect". The more people one meets, the more expansive the involvement opportunities become.
- * The students attributed three items to lack of student involvement : age (college life tends not to be the focus for the older college student), work (because so many of the students work, they simply do not have time for college life), and personality (either too insecure to pursue involvement or not believing that such pursuit was worthwhile).
- * Institutional factors and conditions which could further enhance student involvement included: an institutional culture focused more on supporting the role of the faculty as student-centered and encouraging interaction in the classroom;

encouraging faculty to take attendance so students learn each others' names; the development of a January orientation program; and an institutional culture which values student relationships.

Thus, from the perspectives of commuter college students, opportunity for student involvement exists at Christopher Newport. That opportunity could be further enhanced by the institution, however, in the end, the ultimate decision of how much effort one will exert toward the college experience is left up to the individual student.

Interpretations: Again, this finding is consistent with the literature: Educational effectiveness of any policy or practice is related to the extent to which it encourages college students to take initiative and become actively engaged in appropriate activities (Astin, 1985; Kuh, Schuh, Whitt & Associates, 1991; Pascarella & Terenzini, 1991). The college student must actively exploit the opportunities presented by the university. Student development is not merely the consequence of a collegiate "impact" on a college student. Rather, the individual plays a central role in determining the extent and nature of his or her development according to the quality of effort or student involvement with the resources provided by the college. Therefore, the outcomes of college are a function of what the institution offers and what the student does with those offerings (Pascarella & Terenzini, 1991).

Interestingly, the students in the qualitative study identified the following factors to explain why students did not get involved: age (being older than 25), working, and not perceiving the effort as worthwhile. As discussed earlier, age did indeed contribute to involvement level. Furthermore, Astin's research (1993) identified both working full time and working off campus as negatively impacting involvement in the college experience. Finally, Stewart (1983) claims that attempts to create a "real campus life" for commuter students have been frustrated by the residential image of college life.

The conclusion that the opportunity for involvement could be furthered enhanced by the institution will be further examined in the subsection of this chapter regarding implications.

How are commuter students, who are minimally involved in the collegiate experience, utilizing their time? Are they involved in educationally related activities outside the campus? Do they feel part of the campus community?

Summary of Findings: Based on two weeks of four students recording their activities, a portrait of how commuter students who are minimally involved in the college experience spend their time was presented. As a group, the students spent 62% of their time sleeping (34%), enjoying free time (19%), and working off-campus

(9%). All of these activities were considered to occur off-campus and not to be educationally related.

Based on the activities minimally involved students reported they participated in (from time monitors and interviews), a contingency table was created to analyze whether these students were involved in educationally related activities off campus. A Fisher's Exact Test yielded a significant association between two variables. Thus, based on the significance, it was concluded that commuter students who are minimally involved in the college experience are not involved in educationally related activities off campus.

In response to the final part of the research question, do commuter students who are minimally involved in the college experience feel part of the campus community, evidence was presented to suggest the answer was yes, but to varying degrees.

Interpretations: This research question provided some new information on how some commuter students who are minimally involved in the college experience are utilizing their time. Since it was statistically demonstrated that they are not involved in educationally related activities off campus, more impetus exists for attempting to facilitate their involvement, if one finds the educational benefits associated with involvement worthwhile. Clearly,

for the younger students one could presume that such benefits are worthwhile. However, since the older student is at a different place developmentally, and since there is minimal research available to explain or even portray the college experiences of these students (Pascarella & Terenzini, 1991), the degree of worthiness in facilitating their participation is somewhat unclear. However, all three students who were older than 26 years of age and who had participated in the qualitative component of this study believed some level of involvement was beneficial for the older student.

Key Hypothesis

There are differences between highly involved commuter college students and commuter college students who are minimally involved in the college experience.

Summary of Findings: This hypotheses was tested both through quantitative and qualitative means. To test the hypothesis quantitatively, the concept of involvement was analyzed as four quality of effort factors, three environmental factors, five estimates of gains, and grade point average. Based on the sampling design, the analysis focused on the independent variables of gender, age and enrollment status and utilized a series of multiple

analyses of variance. The results of the statistical tests were as follows:

Significant Findings

Gender-related Findings:

- * Female students put forth more academic and scholarly effort, as measured by the CSEQ, than did male students. However, since gender was measured twice with regard to academic and scholarly effort, and found to be significant only once, its significance was interpreted as somewhat inconclusive.
- * Male students put forth more effort towards science activities, as measured by the CSEQ, than did female students.
- * Female students were more likely to perceive Christopher Newport University as an institution which stresses the development of vocational and occupational competence, as measured by the CSEQ, than were male students. However, since gender was measured twice by the environmental scales regarding the development of vocational and occupational competence, and found to be significant only once, its significance was interpreted as somewhat inconclusive.
- * Female students estimated a greater gain in the development of competence in general education, literature and the arts, as measured by the CSEQ, than did male students.

Age-related Findings:

- * Students younger than 26 put forth more effort toward informal and interpersonal activities, as measured by the CSEQ, than did students 26 years of age and older.
- * Students younger than 26 put forth more effort toward utilizing group facilities and participating in organized activities, as measured by the CSEQ, than did students 26 years of age and older.
- * Students 26 years of age and older were more likely to perceive Christopher Newport University as an institution which stressed the development of vocational and occupational competence, as measured by the CSEQ, than were students younger than 26.

However, since age was measured twice by the environmental scales regarding the development of vocational and occupational competence, and found to be significant only once, its significance was interpreted as somewhat inconclusive.

- * Students younger than 26 years of age estimated greater gains in developing personal/social competence, as measured by the CSEQ, than did students who were 26 years of age or older.
- * Students 26 years of age and older had higher grade point averages than did students younger than 26.

Enrollments Status-Related Findings:

- * Full-time students put forth more effort toward informal and interpersonal activities, as measured by the CSEQ, than did part-time students. However, since enrollment status was measured twice by the quality of effort scales regarding informal and interpersonal activities, and found to be significant only once, its significance was interpreted as somewhat inconclusive.
- * Full-time students put forth more effort toward utilizing group facilities and participating in organized activities, as measured by the CSEQ, than did part-time students.
- * Part-time students estimated greater gains in developing personal/social competence, as measured by the CSEQ, than did full-time students. However, since enrollment status was measured twice by the estimate of gains for the development of personal/social competence, and found to be significant only once, its significance was interpreted as somewhat inconclusive.

Non-significant findings:

Regarding Academic and Scholarly Effort:

- * Age, enrollment, and the interaction of age and enrollment did not contribute to an increase in the quality of academic and scholarly efforts.
- * Age, gender, and the interaction of age and gender did not contribute to an increase in the quality of academic and scholarly efforts.

Regarding Science Activities:

- * Age, enrollment status, and the interaction of age and enrollment status, did not contribute to an increase in the quality of effort regarding science activities.

Regarding Relationships:

- * Age, enrollment status, and the interaction of age and enrollment status, did not contribute to an increase in relationships.
- * Age, gender, and the interaction of age and gender did not contribute to an increase in relationships.
- * Gender, enrollment status, and the interaction of gender and enrollment status, did not contribute to an increase in relationships.

Regarding a Scholarly Environment:

- * Age, enrollment status, and the interaction of age and enrollment status, did not contribute to an increase in perceptions of a scholarly environment.
- * Age, gender, and the interaction of age and gender did not contribute to an increase in perceptions of a scholarly environment.
- * Gender, enrollment status, and the interaction of gender and enrollment status, did not contribute to an increase in perceptions of a scholarly environment.

Regarding an Environmental Emphasis on Vocational and Occupational Competence:

- * Age, enrollment status, and the interaction of age and enrollment status, did not contribute to an increase in perceptions of an environment which emphasized the development of vocational and occupational competence.

Regarding Perceived Gains in Personal/Social Competence:

- * Gender, enrollment status, and the interaction of gender and enrollment status, did not contribute to an increase in perceptions of gains in the development of personal/social competence.

Regarding Perceived Gains in Science and Technology:

- * Age, enrollment status, and the interaction of age and enrollment status, did not contribute to an increase in perceptions of gains in science and technology.

- * Age, gender, and the interaction of age and gender did not contribute to an increase in perceptions of gains in science and technology.
- * Gender, enrollment status, and the interaction of gender and enrollment status, did not contribute to an increase in perceptions of gains in science and technology.

Regarding Perceived Gains in General Education, Literature and the Arts:

- * Age, enrollment status, and the interaction of age and enrollment status, did not contribute to an increase in perceptions of gains in general education, literature and the arts.

Regarding Perceived Gains in Intellectual Skills:

- * Age, enrollment status, and the interaction of age and enrollment status, did not contribute to an increase in perceptions of gains in intellectual skills.
- * Age, gender, and the interaction of age and gender did not contribute to an increase in perceptions of gains in intellectual skills.
- * Gender, enrollment status, and the interaction of gender and enrollment status, did not contribute to an increase in perceptions of gains in intellectual skills.

Regarding Perceived Gains in Vocational Preparation:

- * Age, enrollment status, and the interaction of age and enrollment status, did not contribute to an increase in perceptions of gains in vocational preparation.
- * Age, gender, and the interaction of age and gender did not contribute to an increase in perceptions of gains in vocational preparation.
- * Gender, enrollment status, and the interaction of gender and enrollment status, did not contribute to an increase in perceptions of gains in vocational preparation.

Regarding Grade Point Averages:

- * Gender, enrollment status, and the interaction of gender and enrollment status, did not contribute to an increase in grade point averages.

Thus, quantitatively it was concluded that commuter college students differed with regard to their involvement in the college experience in the following ways: male students put forth more effort toward science activities than do female students; both full-time students and students younger than 26 years of age put forth more effort toward utilizing group facilities and participating in organized activities than do part-time students and students 26 years of age or older; and students younger than 26 years of age also put forth more effort toward informal and interpersonal activities than do students 26 years of age or older. These findings are interpreted following the presentation of the qualitative findings.

This hypothesis was also examined through qualitative methods. The highlights of differences found between commuting students highly involved and minimally involved in the college experience were as follows:

Use of Facilities:

- * Two students were enrolled in only one class. Both of those students were minimally involved students and did not remain on campus following class unless they had to use the library or take care of some administrative task.
- * During class breaks, minimally involved students who remained on campus tended to go to the library and study (usually by themselves) while the highly involved students tended to spend time in the Campus Center either "hanging out" or participating in campus or student activities.

- * Three of the five minimally involved students had off-campus jobs which often required them to leave campus following class. One highly involved student also had an off-campus job, requiring her to leave campus as well. However, her job was on the border of campus and she also had a second job on campus. For this highly involved student, her on-campus and off-campus jobs were not as differentiated as the jobs for the low involved students.
- * Two of the five highly involved students had on-campus jobs while the minimally involved students either worked off-campus or did not work at all. One exception was a minimally involved student who was a music and theatre major. He would periodically be hired to work temporary jobs for the theatre.
- * Students who remained on-campus to participate in campus or student activities were all highly involved students with the exception of the one minimally involved student who majored in music and theatre and participated in many departmental productions.
- * Three of the five minimally involved students preferred to study in the library because the environment was more productive than at home.
- * Through their involvement in student organizations, highly involved students were more likely to participate in student development workshops offered by the University.

Personal Maps:

- * Although all of the maps drawn by the students were different (some very detailed, others not; most filled the page; some were neater than others) no common theme emerged to differentiate highly involved college students from minimally involved college students.

Career Development:

- * Although not a distinct difference, minimally involved students were more likely than were highly involved students to know immediately upon matriculation what they wanted to major in. Such students were described as being very focused.

Academics:

- * The highly involved students tended to have lower GPAs than did the minimally involved students. These high involved students discussed how their GPA was not reflective of the knowledge they had acquired and tended, as upperclassmen, to earn higher grades (including many "A's" and "B's").
- * The highly involved students, however, were more likely to spend time discussing the process of discovering their intellectual selves and how they felt engaged in the educational process.
- * The highly involved students were more likely to talk about learning time management in juggling their academic lives with the "rest of their lives".

Faculty:

- * The highly involved students tended to have stronger, more meaningful relations with faculty than did the minimally involved students.
- * Highly involved students were more likely to describe their relationships with their professors as sociable.
- * Some of the minimally involved students found that simply talking to a professor in his or her office helped the student feel more comfortable when in class.

Administration:

- * Minimally involved students had more complaints about administration of the University than did highly involved students (e.g tuition increases, departmental politics, the way Librarians handled monitoring noise and communication regarding University policy).
- * Highly involved students were more likely to have formed relationships with administrators or those who worked in an administrative/student service office than were minimally involved students.

Self-Understanding:

- * Students highly involved in the college experience were more likely to see themselves as a leader or change agent than were those students who were minimally involved in the college experience.

- * Students minimally involved in the college experiences tended to describe their experiences as being somewhat aloof or being primarily concerned with building their resumes.
- * Highly involved students were more likely to see themselves as being very focused and determined.
- * Highly involved students were more likely to see themselves as engaged in education and enjoying the intellectual process.
- * Highly involved students were more likely than minimally involved students to describe themselves as outspoken, extraverted and friendly.
- * Highly involved students were more likely to talk about how they appreciated the small college environment.
- * Students minimally involved in the college experience were more likely to discuss the desire to become more involved (and that for a variety of reasons why that was difficult), while those highly involved in the college experience were more likely to discuss the conflict involved with learning to find the balance between their academic and social lives.

Family and Friends:

- * For those students that were highly involved in the college experience, they said that as they became involved, their circle of friends expanded. Those new friends facilitated other involvement opportunities thus creating a "snowball effect".
- * Minimally involved students were more likely to spend their free time with family and friends that were not Christopher Newport University students.

Peer Group:

- * Those students who were minimally involved in the college experience were more likely to say that it was difficult to meet other students and make friends than did students who were highly involved in the college experience.
- * Students who said they had enjoyed the opportunity to engage in "a lot of interesting conversations" with other students, tended to score higher on the CSEQ.

Student Subcultures:

- * Highly involved students were more likely to have been an active member of a student subculture than were minimally involved students. Stewart, the music and theatre major was an exception. William, by virtue of being African American, was also an exception, but the nature of that association was limited.
- * Highly involved students possessed more knowledge about the student subcultures at Christopher Newport University.
- * The two students who were members of a social fraternity/sorority were both considered to be highly involved students.

Student Involvement in Out-of-Class Activities:

- * All of the students who were highly involved in the college experience had participated in at least one structured activity (e.g., club membership or participation in a theatre production). Conversely, only one of the minimally involved students (Stewart) had participated in any structured activities.
- * Most of the minimally involved college students expressed a desire to become involved in a club and felt they were "missing out" on part of their college experience.
- * Students highly involved in the college experience believed their experiences in outside-of-the-classroom activities taught them how to balance their social and academic life and made college more rewarding and stimulating.

Commuting:

- * Although there were some differences in how students described the commuter experience, no common theme emerged to differentiate highly involved college students from those minimally involved in the college experience.

Time Monitors:

- * Highly involved commuting college students spent 23% of their time on-campus, while minimally involved students spent only 9% of their time on campus.
- * Highly involved students spent twice as much time (8%) in class, as compared to those students minimally involved in the college experience (4%).

- * Highly involved students spent more time studying at home (6%), as compared to those students minimally involved in the college experience (4%).
- * Highly involved students spent slightly more time (4%) commuting to and from the campus. Group time for those minimally involved on the college experience was 3%.
- * Highly involved students spent 3% of their time "hanging out" in the campus center. Time dedicated to this activity by minimally involved students was negligible.
- * Other on-campus activities engaged in by highly involved students included participation in student organizations (2%), studying on-campus (1%), and eating lunch on-campus (1%). In comparison, minimally involved students spent 4% of their time studying on-campus but no significant amount of time in either of the other two activities.
- * None of the minimally involved students were employed on campus, whereas two of the highly involved students were. Five percent of group time, for highly involved students, was dedicated to on-campus employment.
- * Conversely, two minimally involved students were employed off campus. Group time dedicated to this activity was 9%. One highly involved student was also employed off campus. Her job was on the border of campus and she was able to leave for class and return to work. Group time for highly involved students was 4%.
- * Chores consumed 7% of group time for minimally involved commuting college students, while they consumed only 2% of the time for highly involved commuting college students.

Satisfaction:

- * Only two of ten students felt neutral about college, and both of those students were minimally involved in the college experience.

Institutional History:

- * No common theme emerged to differentiate highly involved college students from those minimally involved in the college experience, with regard to the category of institutional history.

Thus, qualitative analysis also provided evidence that differences between highly involved commuter college students and those minimally involved in the college experience exist.

Interpretations: Clearly there are differences in how highly involved and minimally involved commuter students experience the University. The finding that males put forth more effort toward science activities than do females may be viewed as supporting stereotypical notions. Astin (1993), asserts that "even though men and women are presumably exposed to a common liberal arts curriculum and to other common environmental experiences during the undergraduate years, it would seem that their educational programs preserve and strengthen, rather than reduce or weaken, stereotypic differences between men and women in behavior, personality, aspirations, and achievement" (p.406). He attributes this trend to the "peer group effect." In other words, women are most likely to affiliate with other women during college, while men are most likely to affiliate with other men. As a consequence, the students are each influenced most directly by the values and behavior of peers from their own gender group. Thus, in light of Astin's interpretation, this finding is logical if one accepts the notion that science is often

viewed as a field dominated by men, and therefore reinforced as such through peer influence.

As indicated throughout this document, very little is empirically known about how the older student experiences the university. However, much is known about the life cycle and the development of adults. For example, research has indicated that intellectual development continues through the life cycle and that most of us get smarter as we age (Schaie and Parr, 1985). We also know that people face different developmental tasks during different stages of their life. Thus, a traditionally aged college student would be more likely to be strengthening his or her autonomy, where as a 30 year old may be more focused on strengthening his or her career (Chickering and Havinghurst, 1985). For the younger student, the peer group plays a critical role in developing emotional independence (Chickering and Havinghurst, 1985). Thus with a heightened interest in the peer group at this stage of development, it is logical that younger students would exert more effort than older students toward utilizing group facilities and participating in organized, informal, and interpersonal activities, as they did in this study.

The qualitative component of this study further demonstrated specific differences in the way highly involved and minimally involved commuting students experience the University. Understanding their experiences

may assist both college students and institutions in fostering student development among commuter students. Thus, based on the reported differences, implications for practice are apparent. Those implications will be discussed later in this chapter.

Subsidiary Hypotheses

A college student subculture epitomizing the collegiate way exists within a commuter campus.

Summary of Findings: Through content analysis, evidence was presented to support this hypothesis. Such evidence included the presence of fraternities and sororities, spectator sports, school spirit, student activities, and college friends. Thus, despite absence of the key elements historically associated with the collegiate way (residential setting and a relatively homogeneous student body), commuter students were able to develop and "pass down" student traditions regarding life outside-the-classroom.

Interpretations: It has been asserted that for campuses with many commuting students, "the student body technically exists, but it lacks the network of coherent and influential student cultures often found on residential campuses" (Gusfield, Kronus, & Mark, 1970).

As a case study, then, Christopher Newport University serves as evidence that traditional forms of student life can develop on a commuter campus.

This finding is significant if one accepts the existence of student subcultures as evidence of patterns of student life. In other words, the collegiate way, or at least the nostalgia associated with it, has endured through the history of higher education in the United States. However, if one accepts the assertion that commuter students are less committed to their education, less able academically, and not interested in the college beyond their classes (Rhatigan, 1986), then it follows that commuter students would tend not to participate in student life. Any attempts at participation would probably be disjointed and thus unlikely to provide "continuity and transmittal over time and across student generations so as to be a part of the organizational saga" (Thelin, 1992).

Both traditional (younger than 25 years of age) and nontraditional (25 years of age or older) college students will be represented at both ends (high and low college student involvement) of the distribution.

Summary of Findings: A Pearson chi-square test of association yielded an observed significance level of .04 indicating an association between quality of effort and

age. Hence, although it appears to be true that both traditional and nontraditional age college students were represented at both ends of the quality of effort distribution, the proportion of students at the low end of the distribution was greater for students 26 and older while the proportion of students at the high end of the distribution was greatest for students younger than 26.

Interpretations: As explained earlier, students perceived traditional forms of involvement as more suited for the younger student. This perception may have created a self-fulfilling prophecy. Regardless of the perceptions or causes, the difference was found to be statistically significant. In practical terms, to enhance the involvement level of the older student may necessitate exploring involvement opportunities that are less likely to be perceived as activities suited for the younger student. Older students in the study indicated that curriculum clubs could serve this purpose and the older women students expressed interest in a women's network program. Again, the concept of involvement for the older student merits further investigation.

Full time college students are more frequently represented in the high involved group than the low involved group. The reverse is true for part time college students.

Summary of Findings: A Pearson chi-square test of association yielded an observed significance level of .01 indicating an association between quality of effort and enrollment status. Similar to the variable of age then, although it was true that both full and part-time college students were represented at both ends of the quality of effort distribution, the proportion of students at the low end of the distribution was greater for part-time college students while the proportion of the students at the high end of the distribution was greatest for full-time students.

Interpretations: One of the variables that has been widely introduced in educational research is that of "time on task." Time on task has been correlated with achievement (Pace, 1988). Thus, it follows that full-time students are more likely to devote more time to the college experience, as measured by the CSEQ, than are part-time students. The more classes in which one is enrolled, the more time - both physically and psychologically - one must devote to the college experience.

This was also supported by the students in the qualitative portion of the study. Part-time students, especially those enrolled in one class, were more likely to come to class and leave, whereas full-time students often had breaks in their schedules. Those breaks would be spent on campus engaged in an activity such as using the library, participating in student activities, visiting with a professor, or simply "hanging out" in the Campus Center. What seems to be most significant, then, is attempting to "capture" students on campus, and then help them find ways to utilize that "dead time."

There is a positive correlation between involvement and GPA.

Summary of Findings: To test this hypothesis, a Pearson Correlation Coefficient was calculated on the four quality of effort scales, the three environmental ratings, the five estimates of gains factors and the student satisfaction index. The only significant correlation was between GPA and self-estimated gains in the area of personal/social development. Interestingly, that correlation was found to be negative.

Interpretations: Pace (1988) concludes that the best predictor of academic achievement is quality of effort. With that established, then, how is it possible that involvement and GPA were not positively correlated?

One explanation may be that overall GPA was not a good indicator of academic achievement. In other words, three of the highly involved students spoke vividly of discovering their intellectual sides and being engaged in their education. Two of these students also described very rough beginnings and indicated that their GPA did not reflect the amount of knowledge they had acquired. In fact, their grades tended to be much higher as upperclassmen.

Perhaps then, since the CSEQ asks students to respond to the instrument with regard to their experiences over the past year only, involvement should have been correlated with the grades only for that year. It would make sense that if the quality of effort had increased, then GPA would also have increased. However, if GPA had been weighted by earlier lower grades, but the quality of effort measure had not, then discrepancies in the correlation may be understandable.

Students at the high end of the involvement distribution will feel more satisfied with college.

Summary of Findings: To determine whether the difference between these variable means was greater than would be expected from sampling error alone, an analysis of variance was run. Since none of the F values were significant, it was determined that the sum of quality of effort scores did not contribute to an increase in satisfaction.

Interpretations: Again, Pace (1988) has demonstrated that a relationship between quality of effort and satisfaction exists. Thus, one would have expected statistical significance. This hypothesis, however, was not supported. The data indicated that 75% of Christopher Newport students were either satisfied or very satisfied with their experiences at the University. The distribution of the quality of effort scores, on the other hand, were more spread out: 31 students were considered to be minimally involved, 45 demonstrated a medium level of involvement, while 22 were highly involved.

Another interesting point regarding this finding is that Astin's (1993) research has indicated that the more commuting one does, the less satisfied he or she is in all areas except facilities. Thus, again, commuting students

at Christopher Newport do not adhere to the general pattern of commuters as described by prior research.

A tentative explanation for this pattern may be that in attending a commuter institution, students lower their expectations for what the college experience will entail and are more easily satisfied with their experiences. They like what they are doing and can readily justify lower levels of involvement (e.g., it was never part of their plan, or they do not have time). If students at Christopher Newport view the University as their only viable option for pursuing higher education, they may not be frustrated by visions of a better, or more involved, college life elsewhere.

The students in the qualitative component reported a general philosophy that involvement was not an expectation for older students and for those who worked a lot. This philosophy in itself could be a self-fulfilling prophecy. At any rate, it seems the question of why Christopher Newport students tended to be satisfied with their college experiences, regardless of their involvement level, could be researched further. Is Christopher Newport University simply an anomaly? Or is this case study indicating that there is much more to be discovered and understood about commuter student experiences?

More women than men will be represented at the high end of the involvement distribution.

Summary of Findings: A Pearson chi-square test of association yielded an observed significance level of .93 indicating that any association between quality of effort and gender was simply by chance.

Interpretations: Although there is some indication in the literature that gender differences do exist in the way students experience the university, especially with regard to peer group effects (Astin, 1993), none were found to be significant in this study. Although this may be simply the result of sampling error, it is hazardous to form specific conclusions about this finding until a more solid empirical base exists within the research, especially with regard to commuter students.

Time inventory sheets will indicate that less involved students do have time available for involvement.

Summary of Findings: A content analysis was conducted on the time monitors of minimally involved college students. That analysis indicated that as a group, the four minimally involved students spent 62% of their time sleeping, enjoying free time, and working. Since 19% of the group time was designated as "free time", it was concluded that students who are minimally involved in the

college experience, as measured by the CSEQ, do have time available which could be dedicated to putting forth more effort toward the college, experience.

Interpretations: This finding is significant in that it has been asserted that the commuter student has less time to spend on campus (due to multiple life roles and divided life styles) and to, therefore, commit to his or her college experience. Thus, what has been established is that for some commuter students, time may not be a key variable influencing the quality of effort put forth toward the college experience.

Students at the low end of the continuum and younger than 25 years of age are less satisfied with college, whereas students older than 25 are more satisfied with college regardless of their involvement level.

Summary of Findings: To determine whether the difference between these variable means was greater than would be expected from sampling error alone, an analysis of variance was run. Since none of the F values were significant, it was determined that age, sum of quality of effort scores, and the interaction of age and sum of quality of effort scores did not contribute to an increase in satisfaction.

Interpretations: As indicated earlier, Christopher Newport students tended to be satisfied with their University experiences regardless of their involvement level. Since this finding was not supported in the literature, it is suggested as a topic for future research.

When asked to describe their college student experiences, highly involved students will be more comprehensive and will use a broader definition of involvement, while those students less involved will utilize a more restrictive definition of involvement, will have more restrictive relationships with professors, and will be less aware of student services and involvement opportunities.

Summary of Findings: To examine the evidence available concerning this last hypothesis, four categories were developed and tested: definitions of involvement; faculty relations; student services; and knowledge of involvement opportunities. Through this process it was reasoned that highly involved students were indeed more comprehensive and did use a broader definition of involvement than did minimally involved students. Furthermore, the data regarding faculty relations and awareness of student services yielded little insight.

Finally, it was determined that no conclusions could be drawn about the difference in student awareness regarding opportunities for involvement. Thus, although this was not a statistical hypothesis, in reviewing the qualitative data relevant to this hypothesis, the amount of confidence that one can attribute to any of these findings appears to be somewhat limited.

Interpretations: Since this hypothesis was difficult to analyze, it is almost pointless to attempt any interpretation. Suffice it to say that if interests in this set of questions exists, not only is a reexamination necessary, but better procedures for both data collection and analysis are needed.

Limitations of the Study

An obvious limit of this study is its generalizability. Although sophomores and juniors who have attended a particular institution for the entire collegiate experience appeared to be ideal subjects for providing a window on the commuter experience, it is probably safe to say that that window will not be representative of all college students at a four year state supported metropolitan institution. In fact, during the execution of the study it was discovered that

eliminating transfer students had severe implications for sampling.

As discussed in the section on methodology, the sample frame provided a much smaller sample than planned, due to the fact that approximately 75% of the student body at Christopher Newport University consisted of transfer students. Thus, to determine how drastically the transfer ratio would affect the generalizability of the study, a comparison of Christopher Newport University and its peer institutions throughout the United States, as determined by the State Council of Higher Education in Virginia, was made. Through that comparison, it was determined that although Christopher Newport University had the highest percentage of transfer students, the institution was not an anomaly with regard to its student body composition. The fact remains, however, that any of the findings or insights provided by this study may not be applicable to a large portion of Christopher Newport students, nor to a large portion of students at other metropolitan colleges and universities in the United States.

A related problem was that since so many students were eliminated from sample eligibility, all except for two of the eight sample categories were reduced to less than 25 subjects. (Targeted category sample size was 25.) This not only compounded the issues of representation and

generalizability, but weakened the confidence in the statistical tests.

Moreover, the qualitative component is even less generalizable and is further limited by the mere fact that any interpretation of someone else's experience is simply that. Although the students in this phase of the study were very diverse with regard to characteristics (e.g., gender, age, enrollment status), the fact that none of the students had children at home is important to note. Since children demand much of a parent's time, any interpretations of the data should be assumed to be exclusive of this constituency. Further, it may be possible that time was an intervening variable, especially with regard to the qualitative study. In other words, perhaps students who agreed to participate in the study did so because they had the time to participate. If they had time to participate in the study, then it may also follow that they had time for involvement in the college experience.

Additionally, it should be noted that this study probably both benefits and suffers from the researcher being an "insider". Since the researcher was employed by the institution being studied, perhaps greater insight was provided. At the same time, however, such a relationship may have biased the observations of the researcher. Furthermore, it is not only difficult to accurately

interpret someone else's experience, it is also difficult to ascertain to what extent subjects' behaviors and self-reports remain unaffected by the presence of the researcher. Certainly some control was gained by employing a triangulation of methodology and by engaging in more than one interview session and observation period. However, a research team of a least one "insider" and one "outsider" would probably have brought more balance.

On the other hand, in light of these limitations, and within the context established from the beginning - that this study constituted an exploratory attempt to provide some insight into the commuter college experience, the entire study should not be disregarded. Much of the data, although limited in breadth, is credible, believed to be somewhat transferable, and can be confirmed through a variety of documents (i.e., interview transcripts, time monitors, personal maps, self-reports).

Implications

If one accepts a broader definition of education, one beyond that of only intellectual development, then presumably commuter institutions have less impact than residential institutions upon the development of their students. As Pascarella and Terenzini (1991) point out, however, such a statement is not intended to diminish the

substantial contributions commuter institutions make to the enhancement of the lives of the many students who attend them (80% of all college students). Again, the issue is one of character, and in this vein, the significance of this inequality is striking.

Can this gap in educational outcomes be narrowed? Should it be narrowed? If so, should this narrowing focus on an increase in resources and creative ideas to bring the experiences of the commuter student closer to that of the residential student? Or does higher education need to reconceptualize the theory of college student involvement to incorporate the off-campus lives of the commuter student? Would such a reconceptualization be progressive in altering the existing biases toward the residential experience, or would it simply help rationalize the inequalities? Whatever the answer to these questions, it seemed to be important to first take a step back and attempt to clearly understand the commuting experience. If the research indicating that part of the problem with higher education's lack of response to the commuter college students' needs is embroiled and perpetuated by a bias toward the residential experience is true, then it becomes imperative to gain insight into the commuting experience, before attempting to answer these questions. This study began to provide such insight.

The commuting student experiences portrayed in this study indicated, as has Pace's (1988) research, that commuting students experienced the University differently from one another. Some students were highly involved; others were minimally involved. Thus the study supported his contention that the most important aspect of involvement, and more specifically of quality of effort, is not where one goes, or who one is, or even where one lives, but what one does!

Since, according to prior research, commuting and involvement are negatively correlated (Astin, 1993), the scores for Christopher Newport students on the CSEQ, in combination with the variance of the experiences described by the students in the qualitative component of the study, may support Pascarella and Terenzini's (1991) supposition that the inequities with regard to the involvement of resident and commuting students may simply reflect the fact that a residential setting is better able to facilitate peer relationships, which in turn enhance the involvement of students. Some commuting college students clearly put forth a significant amount of effort toward their college experience, in spite of the fact they were commuters. In contrast, other commuter students did not put forth much effort. Thus, it appears that if a commuter institution could focus more on helping students get to know one another in constructive ways, then the inequities

between commuting and resident students, with regard to involvement levels, might become more balanced.

Therefore, as supported by both the existing literature and this study, and as indicated above, one key to at least modifying those differences, and thus to better facilitate the involvement of commuter students, relies upon the ability of the commuter institution to enhance the relationships between and among its students in constructive ways. The highly involved students in the qualitative study indicated that by meeting a couple of students who were involved, they were influenced to become involved themselves. Soon after, a snowball effect was created, and many more opportunities were made available to them. Thus, based on the documentation presented in this study, the following suggestions for facilitating commuter student involvement are offered:

1. Highly involved students described themselves as outgoing and friendly. Several of the students held either key student leader positions or key student employment positions. Thus, teaching such students to see part of their leadership and employment responsibility as serving as "ambassadors" to the University, especially with regard to being friendly toward other students, could be helpful.

2. Student leaders have often developed skills effective in leading their group, but their recruitment skills are often lacking. Thus, assisting student leaders

in learning how to better recruit and retain new members for their organization would also probably contribute to an increase in peer relationships.

3. An obvious suggestion from a minimally involved student was to ask the faculty to take attendance. Even better would be to have the students introduce themselves. Further, a shift in pedagogy where appropriate, to encourage more involvement in the intellectual process, would be superb. Since that is not likely, perhaps at a minimum requesting faculty to take attendance, or to simply have the students introduce one another to those sitting around him or her, would not be too burdensome.

4. Study groups were an interesting aspect of student involvement for commuting students. Encouraging the use of such groups may prove to be beneficial.

5. Orientation seems to be a key to facilitating involvement. This observation was supported both in the literature and by the students. The addition of a January orientation program would be beneficial to Christopher Newport University in particular, since the University does not currently sponsor one. Continued student feedback regarding the current programs and improvement of those programs should be continued.

6. Some departments either required or encouraged involvement in campus life. For example, music majors had to attend a certain number of concerts each semester they

were enrolled in a music class. Education majors were required to participate, at varying levels, in the Student Virginia Education Association. Focusing involvement on curriculum clubs is a particularly good suggestion since older students tended to view curriculum clubs as beneficial, regardless of their involvement level. Curriculum clubs are also in a unique position to foster both social and intellectual development. Certainly one could argue that given the vocational interests of students these days (i.e., they attend college to enhance their career opportunities) creating linkages between the major and curriculum clubs is logical. Even better, facilitating some relationship between student societies and professional associations may be very useful. Perhaps the process of declaring a major and an invitation to join that curriculum club could be somehow linked. At a minimum, faculty support of such clubs is important. Again this does not have to be time consuming. Simply announcing the next club meeting in class might prove to be helpful.

7. Although the students in this study were satisfied with their relationships with faculty, encouraging this relationship is still a good idea. Some students said they accompanied other shy students to a professor's office. If student peer relationships begin to improve, the likelihood of this continuing may increase.

8. Complaints about academic advising were lodged. Since academic advising is important, and can be confusing, a commitment from the University to explore and improve this component of the student experience would be helpful.

9. Following the completion of one's class schedule, students were likely to remain on campus only if they had some purpose. Thus, planning programs and services around peak class times may help attendance at such programs.

10. Similarly, understanding how students spend their time during breaks in their schedule provided some insight. First, many minimally involved students went to the library. The library, then seems to be a good place to find such students. Perhaps it would serve as a good location for student orientation leaders to be available to greet students at the beginning of the year and to answer any questions. Second, if there is a pattern to when those breaks tend to occur, then programming accordingly might be wise. Some Universities have the luxury of scheduling a community or activity hour in which no classes can be conducted.

10. Both of the older women who participated in the qualitative component of this study expressed interest in a network program. Interestingly, there is a community group called the Peninsula Women's Network. Perhaps that community group would be interested in sponsoring such a

program. This would give older women students an opportunity to develop relationships with other CNU students and other professional women in the community. The community group would offer such a student network stability and credibility.

11. Almost every student in the qualitative component of this research study read the student newspaper either occasionally, or frequently. A student development column might be created. Involvement opportunities and programs could be highlighted. In addition, simple ideas could be presented (e.g., "Tips on Studying with Small Children").

12. Students mentioned specific elements of institutional history which influenced their decision to attend the University. Obviously, the Alumni Office, Admissions Office, and any other appropriate office should be made aware of these factors. In other words, discussion with students regarding their college experience is an excellent form of market research.

13. Similarly, recognizing the insight gained from both the CSEQ and the discussions with students about their experiences, on-going assessment and periodically forming focus groups to continue to understand how the students are experiencing the University, would be most valuable.

One of the findings of this study indicated that it is more challenging to involve the older student. Thus, in addition to the thirteen suggestions outlined above, and specifically suggestions #6 and #10 which are intended to have strong appeal to the older student, it is helpful to present the recommendations proposed by Kuh, Schuh, Whitt, & Associates (1991, p.356) for involving adult students:

1. Assess the campus climate for adult learners; do not take for granted that their needs are being met. Are campus services adequately available to them? Are they able to and do they know how to take advantage of opportunities for involvement? Are support services adequate to meet their needs (for example, child care or adult learner support groups)?
2. Invite spouses or significant others to orientation programs designed specifically for them.
3. Arrange child care for all campus events, such as orientation, especially for those activities at times when children are not in regular child care (nights and weekends).
4. Encourage families to attend events by sending special invitations and by offering reduced rates to spouses and children of students.
5. Establish a task force to advise decision makers on policies and services, such as advising hours, financial aid policies, office hours, and registration procedures, to increase access for nontraditional students.
6. Create programs (one time and ongoing) that meet special needs of older students, such as single-parent support groups, budgeting for college with a family, and balancing academic demands with a job.

Thus, these thirteen suggestions for facilitating involvement among commuter students are based upon the

understanding gained by listening to the voices of a few commuter students. The thirteen suggestions, and the supplemental six suggestions offered by Kuh, Schuh, Whitt & Associates, provided some evidence that a commuter institution can become an "involving college," which in turn would help to build community and enhance student development.

Finally, it is important to revisit Astin's (1993) conclusion that the ideal model for higher education is one that is residential and serves a homogeneous student body of full-time students, younger than 26 years of age. Although this study supported the notion that those traditional college students are more predisposed to involvement, it did not suggest that educators should give up on students not fitting this profile. Instead, it seems appropriate to be more creative in first understanding, and then in meeting, the needs of such nontraditional students. It calls for a shift in our frame of reference.

Two themes that ran through this study had to do with facilitating constructive peer relationships, and especially for the older student (but also of interest for the younger student), an emphasis upon **useful** involvement opportunities. For example, the students found the curriculum clubs provided an avenue in which they could meet other students with similar interests, and as a group the students could structure club activities to further

their career interests and goals. The one lecture a biology major attended had to do with the reproduction of jelly fish in space. An accounting major had been interested in the leadership position of student auditor because of the practical experience it provided. A Psychology major had spent time researching community organizations she might volunteer for to learn more about career opportunities within the field, with the goal of discovering if those opportunities were compatible with her values and definition of quality of life. Study groups were useful to students in both supporting and their academic needs and in developing personal relationships. These pieces of information, taken together with other suggestions such as developing ties between curriculum clubs and professional associations, and enhancing internship and co-operative learning partnerships between business and higher education, may be the core of the creativity needed to enhance the involvement of all students, and especially the nontraditional student.

Perhaps then, full-time residential, traditionally aged students tend to be predisposed to college student involvement because, as Jacoby argues, higher education is focused primarily upon the needs of those students. Since higher education was willing to open its doors to an influx of students who do not fit the traditional profile, then perhaps an obligation was created to understand and

respond to the needs of those students. The students in this study indicated that their needs were focused on opportunities which would enhance their future. Based on this finding several suggestions for facilitating useful involvement experiences have been offered.

In addition to those suggestions, and on a larger scale, perhaps what is needed is for universities with large nontraditional student populations to resist the temptation to model themselves after the ivy league and status quo universities, founded to serve traditional populations, and to begin to explore more progressive nontraditional models such as the cooperative learning program of Northeastern University, in which students attend class every other semester and work in the field of their major during the off semesters. At any rate, the key to understanding the involvement of commuter students must begin by listening to them, understanding their perspectives, and most importantly, understanding their needs. This study began to provide such an understanding and suggests that involvement for such a diverse population may be more complex than simply accepting the previously established definitions of college student involvement. Thus, this study illustrates a need for further research regarding this college constituency of nontraditional students who tend to matriculate at

commuter institutions such as Christopher Newport University.

Suggestions for Future Research

This study not only provided insight into the college experiences of commuting students, but also demonstrated a need for further research into understanding this constituency. Throughout the implications, and based on the findings of this study and the research literature, it was proposed that the involvement of commuting students might be facilitated by effectively enhancing student peer relationships. This proposition warrants further testing.

In discussing the profiles of highly involved and minimally involved commuting college students, it was mentioned that some of the profiles of those students who participated in the qualitative component of the study did not make sense. Two students in particular, one highly involved and one minimally involved, stood out. These two students were discussed in interpreting the research findings for the second research question: What are the profiles of highly involved commuting college students? Clearly their presence indicates a need for clarification of the concept and further research in reference to student involvement and the quality of effort exerted by commuter students.

Further research is also needed regarding the acculturation and involvement of transfer students, and in particular, commuting transfer students. Out of 4,788 students enrolled in the Fall of 1992, only 892 (19%) were initially eligible to be part of the sample frame. The shrinkage of the available subject pool indicates that the largest constituency was overlooked in this study. Why did they transfer to Christopher Newport? How do their past college experiences affect their educational goals and expectations of the current institution?

Other agenda items for future research include the following: Why were students at Christopher Newport University satisfied with their experience regardless of their involvement level? Is there a relationship between major and satisfaction (i.e., is satisfaction higher among students with majors which involve the processing of more concrete information such as the natural sciences than are students with majors which involve the processing of more abstract concepts such as the humanities)? If time is not a key variable in influencing the quality of effort of minimally involved students, then what is? How do older students experience the University? How do differences in gender influence the college experiences of commuting student? Is there a relationship between a person's locus of control and quality of effort? Why were GPA and involvement not found to be correlated in this study, yet

have been in the literature? If it is unusual to find such strong evidence of the "collegiate way" on a commuter campus, then how did it develop at Christopher Newport? What other differences exist between highly involved and minimally involved commuting college students? With further research, a clearer profile of the highly involved commuting college student should emerge. Further research should also examine more closely whether commuting students with certain characteristics and experiences are more likely to participate in some activities and not in others? Similar to this study which focused specifically on the involvement of commuter students, colleges that are successful in involving part-time students (some are identified by Kuh, Schuh, Whitt & Associates) should be used as case studies regarding the relationship between involvement and age, and involvement and part time enrollment status.

These are but a few suggestions for continuing to discover, and to attempt to understand, the commuter student experience. In fact, based on this study, what seems most evident, is a need for further research.

Appendix A-1

August 26, 1992

Name
Address
City, State Zip

Dear Name:

As you are aware, this is an exciting time for Christopher Newport University. In addition to our initiation of graduate programs and recent change to university status, we are very excited to begin the construction of our first residence hall this Fall! Faculty, staff and students alike have discussed with enthusiasm the impact a residence hall will have on student life. As the Director of Student Life, I believe that in order for Christopher Newport to be successful in integrating residential and commuter life, it is very important for the University to fully understand how our current students experience student life.

Here's where you come in, (name). You are one of a select group of Christopher Newport students who have been selected to participate in a study concerning the out-of-class experiences of commuting college students. Would you please assist me, (name), by giving me a few minutes of your time to complete the enclosed questionnaire? At first glance you may think it will take a long time to complete, but most students complete it in a half hour or less.

In addition to helping me and your University, (name), you will probably learn about yourself as well. Students often find that completing this questionnaire can help crystallize and focus thoughts concerning experiences during the past year -- what your involvements were and how you gained from those experiences -- which may lead to setting goals and making some informed decisions about what you want to accomplish this year! As mentioned previously, equally important from my perspective, this survey will provide a vehicle for communicating your experiences so that myself and other administrators can better understand student life at CNU, from your point of view. The end result, I hope and have every reason to believe, will be improvement of students life at Christopher Newport.

Since your responses may impact student life at Christopher Newport, it is important that your answers are honest. Individual responses will be treated with strict confidentiality - I will be the ONLY PERSON able to identify individual responses. I have also enclosed a form to secure your written permission to include your GPA in this study. The use of your GPA will be treated with an equally high degree of confidentiality and will not be reported in any way that will lead to your identification.

I have also enclosed an instruction sheet, and for your convenience, a Christopher Newport University pencil (yours to keep) and a stamped return envelope. You may either mail the completed questionnaire or drop it off at the Office of Student Life (CC189) when you are on campus - whichever is most convenient for you! Please return the GPA permission form with your survey. I need to receive you completed information by Monday, September 21, 1992.

Thank you for your consideration, (name). Please understand that your participation in this study is voluntary and you may withdraw at any time. I also hope you understand how important your participation is and choose to make a difference at CNU! Should you have any questions, please feel free to call me at 594-7260 or stop by the Office of Student Life.

Sincerely,

Tisa Mason
Director of Student Life

Enclosures: Instruction sheet
Christopher Newport University pencil
Permission form to use GPA
College Student Experiences Questionnaire
Return envelope
Christopher Newport University car sticker

Appendix A-2

Instructions

1. Read and follow the instructions on page one of the College Student Experiences Questionnaire.
2. The first section you will complete concerns background information. Where appropriate, answer questions as if you were completing this questionnaire last April. For example, if you are currently a junior but you were a sophomore last April, please fill in the circle marked "sophomore."
3. The instructions for the next three sections (College Activities, Conversations, and Reading/Writing) indicate that you should answer the questions based on your experiences during the current school year. Once again, reflect upon your experiences last year (Fall 1991 and Spring 1992) when answering these questions.
4. Following the printed instructions, please complete the sections concerning "Opinions About College," "The College Environment," and "Estimate of Gains."
5. On page 8 there is a box entitled "Additional Questions." Please do not complete this section; there are no additional questions.
6. Read and sign the paper entitled "Permission to Use GPA."
7. Return the completed College Student Experiences Questionnaire **and** the signed GPA permission form to the Office of Student Life. A stamped and addressed envelope is included in your packet for your convenience. I will also be glad to accept your information in person at the Office of Student Life. Please note that I need your information by **Monday, September 21, 1992.**
8. Display your Christopher Newport University sticker and feel great about making a difference at CNU!

Appendix A-3

Permission to Use GPA

Christopher Newport University is an institution of higher education, and therefore an important aspect of this study on student life is how GPA correlates with student experiences. Therefore, I understand that Tisa Mason, Director of Student Life, will be using my GPA in her study of student life at Christopher Newport University. I further understand that by authorizing the use of my GPA in this student life study, confidentiality will be maintained and that my GPA will not be reported in any way that will lead to my identification.

Student Name:

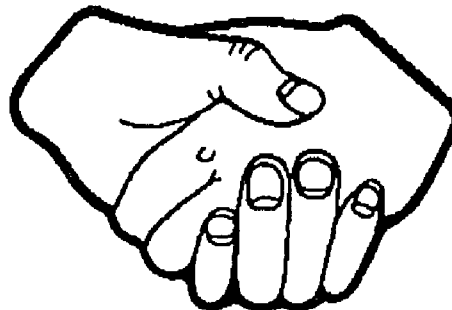
Signature:

Date:

I, Tisa Mason, pledge to you that use of your GPA is being requested as an important component of this study. I will respect your rights to privacy and handle all information with the highest degree of ethical conduct.

Signature:

Date:





You're the key to our success! -- Eagerly awaiting your completed College Student Experiences Questionnaire! Your experiences are important to us - please contribute to this study on student life. I need to hear from you by September 18, 1992. If you need additional information, please contact me at the Office of Student Life (594-7260) prior to the 18th. Thanks!

Sincerely,

Tisa Mason

Director of Student Life

Appendix A-5

October 8, 1992

Name
Address
City, State Zip

Dear Name:

I have great news for you! Remember the College Student Experiences Questionnaire I sent? Well I REALLY need you to take the time to complete and return your questionnaire. I realize however, that students often have a lot of important things to do and that time can be a very limited resource. So I have made an arrangement which may result in a time savings. Please read on...

Did you know that as of 1989 a new graduation requirement was added to the catalog? It reads as follows:

9. ASSESSMENT REQUIREMENTS: The University engages in a number of assessment processes, the purpose of which is to gauge the effectiveness of its educational program. These processes may involve students being required to participate at various times in examinations, interviews, or other assessment-related activities that are not part of any specific course. Each student will be given timely notification of the assessment activities required by his or her program of study. The satisfactory completion of such required activities is an essential component of the completion of the degree requirements and, therefore, a "general requirement" for graduation from the University.

Don't worry, I am not requiring you to return your questionnaire. However, beginning this Spring, graduating seniors may be asked, as part of this requirement, to take a three hour exit exam. I have asked Dr. Dennis Ridley, Director of Student Assessment, if he would excuse you from this exam if you returned your College Experiences Questionnaire. He agreed! Thus, if you complete and return your College Student Experiences Questionnaire, your name will be submitted to Dr. Ridley, whether or not you are a graduating senior, as having completed the senior general education assessment requirement!

Name, this was the best incentive I could think of to motivate you to participate in this study. Your input really is very important. I need at least a 70-80% return or I will not be able to use the questionnaires other students took the time to complete. PLEASE help us make a difference at Christopher Newport!

In case you have misplaced your survey, I have enclosed another copy as well as a duplicate of the instruction sheet and GPA permission form. I need your completed questionnaire and GPA permission form returned by Tuesday, October 20, 1992. DO NOT mail the questionnaire. Please either deliver it to the Office of Student Life or drop it in an on-campus mailbox. There are wooden on-campus mailboxes in every CNU building.

Again, thank you for your consideration, name. I hope you understand how important your participation is and choose to make a difference at CNU! If you have any questions, please feel free to call me at 592-7260, or to stop by the Office of Student Life.

Sincerely,

Tisa Mason
Director of Student Life

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Vita

Tisa Ann Mason

Birth Date: February 8, 1961

Birth Place: Palmer, Massachusetts

Education:

- 1991-1993 The College of William and Mary
Williamsburg, Virginia
Doctor of Education
- 1989-1991 The College of William and Mary
Williamsburg, Virginia
Educational Specialist
- 1983-1984 Eastern Illinois University
Charleston, Illinois
Master of Science
- 1979-1983 Transylvania University
Lexington, Kentucky
Bachelor of Arts

Specialized Training:

- 1993 Peninsula Chamber of Commerce
Leadership Institute
Newport News, Virginia
Certificate
- 1985 Interfraternity Institute
Bloomington, Indiana
Certificate
- 1984 National Association for Campus
Activities
Columbia, South Carolina
Certificate

Professional Experience:

- 1987-Present Director of Student Life
Assistant Professor
Christopher Newport University
Newport News, Virginia
- 1984-1986 Assistant Dean of Students
Hanover College
Hanover, Indiana
- 1983-1984 Administrative/Graduate Assistant
Eastern Illinois University
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