Factors Impacting Student Retention on the Regional Campuses and Centers of Ohio University

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ABSTRACT

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Student retention in higher education is, or at least should be at the center of the radar screen of every college and university. It involves one of the foundations of higher education and the economic health of the institution. The recruitment of new and retention of current students has never been more critical from an economic perspective.

This research concentrates on the retention in a different environment, specifically, the regional campuses of Ohio University. This university system incorporates five regional campuses and two centers that have an open-enrollment policy and are non-residential. The campuses offer a variety of associate and baccalaureate programs as well as a limited number of cohort graduate degree programs. The goals of students attending regional campuses might match those of students in a traditional environment; however, their characteristics mirror students at a community college: they are commuters; a significant number are non-traditional in age; and significant factors outside college, such as family and full time employment, impact their lives (Liu & Liu, 1999).

This research used a student satisfaction inventory to assess the importance of and satisfaction with numerous scales and variables that impact student retention. The results showed three of the scales positively impacted student retention. Campus climate, safety and security and student centeredness all have significant relationships with student
retention. In addition three enrollment factors related to retention and some demographic factors positively relate to student persistence.

Approved: _____________________________________________________________

Robert B. Young

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This has been a journey that at times I thought may never be completed. Beginning the program in Higher Education at the same time the Pickerington Center opened gave me a unique opportunity to see immediate relevance between classroom and practice. It also directed me to a study that is related to my everyday job. While at times this has been a very isolating experience, it is not one I achieved alone.

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# TABLE OF CONTENTS

ABSTRACT

ACKNOWLEDGMENTS

LIST OF TABLES

CHAPTER ONE: INTRODUCTION

  Background of the Study
  Statement of the Problem and Purpose of the Study
  Significance of the Problem
  Research Question
    Research Question One
    Research Question Two
    Research Question Three
    Research Question Four
  Hypotheses

  Delimitations and Limitations of the Study

CHAPTER TWO: REVIEW OF THE LITERATURE

  Introduction of the Literature
  Critical Review of Relevant Literature
    Tinto’s Theory of Integration
    Tinto’s Sociological Model
CHAPTER THREE: METHODOLOGY

Identification of the Population

Instrumentation

The Scales:

Reliability and Validity Issues

Research Question

Research Question One

Research Question Two

Research Question Three

Research Question Four
Hypotheses ................................................................................................ 79
Data Collection Procedures ......................................................................... 83
Data Analysis Procedures ........................................................................... 84
Data Analysis Process ............................................................................... 85
Operationalizing the variables used in the analysis ...................................... 86
Summary ............................................................................................................... 93

CHAPTER FOUR: ANALYSIS OF DATA AND FINDINGS ................................. 94

Background ........................................................................................................... 94

Response by Campus ........................................................................................ 95

Frequencies and Mean Scores of Items in the Importance and Satisfaction Scales ........................................................................................................ 97

Research Question One Findings ............................................................... 100

Sub-Hypothesis Testing Results ................................................................. 102

Summary Research Question One .......................................................... 112

Research Question Two Findings ............................................................... 112

Tests of the sub-hypothesis ......................................................................... 113

Summary Research Question Two .......................................................... 116

Research Question Three Findings ............................................................. 117

Tests of the null sub-hypotheses ................................................................. 117

Summary Research Question Three ........................................................ 132

Research Question Four Findings ............................................................... 132

Summary of Research Question Four ....................................................... 138

Summary Analysis of Data and Findings .................................................. 138
CHAPTER FIVE: DISCUSSION AND CONCLUSIONS ........................................... 140

Results and Discussion of the First Null Hypothesis ........................................ 142

The first null hypothesis was: .......................................................................................... 142

Summary of the Tests of the First Null Hypothesis ................................................. 145

Results and Discussion of the Second Null Hypothesis ...................................... 146

Summary of the Tests of the Second Null Hypothesis ........................................... 147

Results and Discussion of the Third Null Hypothesis .......................................... 148

Summary of the Tests of the Third Null Hypothesis ............................................. 150

Results and Discussion of the Fourth Null Hypothesis ....................................... 151

Summary of the Fourth Null Hypothesis ................................................................. 152

Implications for Practice ......................................................................................... 152

First Null Hypothesis ............................................................................................... 152

Second Null Hypothesis ......................................................................................... 154

Third Null Hypothesis ........................................................................................... 155

Fourth Null Hypothesis ......................................................................................... 156

The Overall Research Question ............................................................................. 156

Focusing on Factors that Can Be Changed ............................................................ 157

RECOMMENDATIONS FOR RESEARCH ............................................................... 158

REFERENCES ........................................................................................................... 160

APPENDIX A .............................................................................................................. 170
LIST OF TABLES

Table 1: Valid responses by Campus................................................................. 96
Table 2: Retention by Campus Participants..................................................... 97
Table 3: Importance and Satisfaction Scales Frequencies ............................... 99
Table 4: Importance Scale Regression Summary .......................................... 101
Table 5: Satisfaction Scale Regression Summary ......................................... 101
Table 6: Gap of Importance and Satisfaction Scale Regression Summary ......... 102
Table 7: Regression of Importance Scales ................................................... 110
Table 8: Regression Satisfaction Scales ...................................................... 111
Table 9: Regression of Gap Scales .............................................................. 112
Table 10: Enrollment Factors Model Summary .......................................... 113
Table 11: Regression of Enrollment Factors ............................................... 116
Table 12: Chi-Square Gender and Retention ................................................. 118
Table 13: Cross-Tabulation Gender and Retention ...................................... 118
Table 14: Chi-Square Age and Retention .................................................... 119
Table 15: Cross-Tabulation Age and Retention ............................................ 119
Table 16: Chi-Square Traditional Age and Retention ................................... 120
Table 17: Chi-Square Ethnicity and Retention ............................................. 121
Table 18: Cross-Tabulation Ethnicity and Retention ................................... 121
Table 19: Chi-Square Caucasian and Retention ........................................... 122
Table 20: Chi-Square Enrollment Status and Retention ................................. 123
Table 21: Cross-Tabulation Enrollment Status and Retention ....................... 123
Table 22: Chi-Square Class Load and Retention .......................................... 124
<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
<td>Cross-Tabulation Class Load and Retention</td>
<td>124</td>
</tr>
<tr>
<td>24</td>
<td>Chi-Square Class Level and Retention</td>
<td>126</td>
</tr>
<tr>
<td>25</td>
<td>Cross-Tabulation Class Level and Retention</td>
<td>126</td>
</tr>
<tr>
<td>26</td>
<td>Chi-Square Traditional Class Level and Retention</td>
<td>127</td>
</tr>
<tr>
<td>27</td>
<td>Chi-Square GPA and Retention</td>
<td>128</td>
</tr>
<tr>
<td>28</td>
<td>Cross-Tabulation GPA and Retention</td>
<td>128</td>
</tr>
<tr>
<td>29</td>
<td>Chi-Square Educational Goal and Retention</td>
<td>129</td>
</tr>
<tr>
<td>30</td>
<td>Cross-Tabulation Educational Goal and Retention</td>
<td>130</td>
</tr>
<tr>
<td>31</td>
<td>Chi-Square Employment and Retention</td>
<td>131</td>
</tr>
<tr>
<td>32</td>
<td>Cross-Tabulation Employment and Retention</td>
<td>131</td>
</tr>
<tr>
<td>33</td>
<td>Chi-Square Employment Full or Part Time and Retention</td>
<td>132</td>
</tr>
<tr>
<td>34</td>
<td>T Test for Expectations and Retention</td>
<td>134</td>
</tr>
<tr>
<td>35</td>
<td>Cross-Tabulation Expectation and Retention</td>
<td>134</td>
</tr>
<tr>
<td>36</td>
<td>T Test for Satisfaction and Retention</td>
<td>135</td>
</tr>
<tr>
<td>37</td>
<td>Cross-Tabulation Satisfaction and Retention</td>
<td>136</td>
</tr>
<tr>
<td>38</td>
<td>T Test for Right Decision and Retention</td>
<td>137</td>
</tr>
<tr>
<td>39</td>
<td>Cross-Tabulation Right Decision and Retention</td>
<td>137</td>
</tr>
</tbody>
</table>
CHAPTER ONE: INTRODUCTION

As many authors have affirmed, assessing student retention and the factors impacting it is a complex subject. Borland (2000) states the difficulty arises when divergent paradigms of values and desired results come together as one.

Retention is, or at least should be, at the center of the radar screen of every college and university if for no other reason than it involves one of the foundations of higher education and the economic health of the institution. Many states and systems use retention rates and completion rates as factors in their funding formulas (Measuring up, 2002). As more states and systems move to performance-funding models, the economic health, stability, and success of institutions come to depend more and more on student retention.

In July, 2005, the House Education Committee passed a bill that requires an annual report of public institutions tuition and fees. This bill came about as part of the Higher Education Act reauthorization. It set “college consumer profiles” and created an index limit for the amount of tuition increase permitted in a year. Those institutions over the tuition limit were subject to a fee, clearly illustrating the increasing expectation of accountability in higher education (Seybert, 2006).

In Ohio, public higher education continues to take significant reductions in funding. A popular statement is that higher education was once state funded, then state supported, and now, it is state located. Consequently, the recruitment of new and retention of current students has never been more critical from an economic perspective.
Background of the Study

The research, theories, and conversations surrounding student retention have been focused primarily on one environment: students in the traditional, residential institution. The students there are traditional age, attending full time, and if not living on campus specifically, live in the college community and away from home. To illustrate, the Office of Institutional Research stated in the *Common data set* (2003) that four percent of students at Ohio University were age 25 and older, and the average full-time student was 20 years old. The report continued that 96% of first-year students on the Athens campus lived in college-owned housing (Office of Institutional Research, 2003).

Limited research has been done in alternative environments and primarily focused on the community college, a commuter campus situation with what often is a significant, if not predominantly, non-traditional population. The lives of these students are shaped by external forces, particularly if the campus is in an urban setting (Lui & Lui, 1999). Many are older, and older students experience less support than traditional-age students, although they do tend to have a higher level of institutional commitment initially than their younger peers (Napoli & Wortman, 1998). The goals of these students range from taking a class, to learning a skill or skill set (such as a certificate program), to earning an associate degree and/or transfer to another type of institution for baccalaureate degree completion (Liu & Liu, 1999).

This research concerns retention in a different environment, specifically, the regional campuses of Ohio University. This university system incorporates five regional campuses and two centers that have an open-enrollment policy and are non-residential. The campuses offer a variety of associate and baccalaureate programs as well as a limited
number of cohort graduate degree programs. The goals of students attending regional campuses might match those of students in a traditional environment; however, their characteristics mirror students at a community college: they are commuters; a significant number are non-traditional in age; and significant factors outside college, such as family and full time employment, impact their lives (Liu & Liu, 1999).

The authors of the *National survey of first year experience* (Barefoot & Siegel, 2000) declared that the majority of attrition occurs during the first year or between the first and second years of enrollment. Barefoot and Siegel (2000) identified five factors that predicted student retention: (1) the academic preparation of entering students, (2) involvement of a student in the total life of the campus, (3) the interaction of a student with faculty and other students, (4) the student’s commitment to the institution, and (5) his or her personal goal commitment and motivation to succeed (Barefoot & Siegel, 2000).

A regional campus has little control over many of these factors. While a selective institution has the prerogative to set standards of acceptance based on academic credentials, regional campuses are open-enrollment institutions. An open-enrollment campus will accept any first-time college student who has a high school diploma or GED (Graduate Equivalent Diploma). Students often attend a regional campus, not prepared for college level academics, a fact illustrated by the number of remedial classes students are required to take. Residential institutions have the ability to program opportunities for student involvement in the campus community while regional campuses are commuter institutions with limited program opportunities. This factor further reduces one’s commitment to the campus.
Statement of the Problem and Purpose of the Study

Student retention in higher education is central to the healthy financial position of an institution, and much research has been done on student retention at traditional, selective, residential campuses. Limited research has been done in a commuter campus environment, and the majority of that research has been from a community college perspective. A regional commuter campus of a four-year institution presents a mix of factors related to both residential and community colleges, and the retention of its students needs to be explored.

In this study the researcher will compare responses to a student satisfaction survey with student retention through the 2005-6 and into the 2006-7 academic years. The results will help fill the gap in the literature related to retention on regional campuses of four year institutions. The assessments were administered at all five regional campuses and two centers of Ohio University in the fall of 2005. This study will use the student response data from the fall 2005 and their student status in fall 2006 to evaluate the factors related to their continued retention. The data will be looked at collectively to assess regional campuses and centers as a system and not as individual sites.

Significance of the Problem

Excellent enrollment management helps an institution of higher learning have a predictable and strong fiscal foundation leading to continued viability, and student retention is the pivotal component of enrollment management. Additionally, many state and university governing bodies have performance-funding components (Measuring up, 2002), performance-funding holds institutions accountable for achieved student outcomes (Carr, 2000). University goals for student retention and retention rates are often included
in lists of performance-funding indicators. The retention of students until they achieve their academic goal is fiscally imperative on traditional four-year institutions, community colleges and, in this study, regional campuses.

**Research Question**

The overall research question is:

Is there a relationship between student reports of their perceived importance and satisfaction with retention factors, their perceived importance of enrollment factors, and their demographic characteristics, with their actual retention at the regional campuses and centers of Ohio University over a two-year period?

**Research Question One**

Is there a relationship between student reports of the importance of and their satisfaction with retention factors reported in the *Noel Levitz: Student Satisfaction Survey 4-year College and University Version* and their retention at a regional campus?

The secondary research questions are:

1. Is there a relationship between the reported importance given academic advising, the satisfaction derived, and student retention?

2. Is there a relationship between the reported importance given campus climate, the satisfaction derived, and student retention?

3. Is there a relationship between the reported importance given campus life, the satisfaction derived, and student retention?

4. Is there a relationship between the reported importance given campus support services, the satisfaction derived, and student retention?

5. Is there a relationship between the reported importance given concern for the individual, the satisfaction derived, and student retention?
6. Is there a relationship between the reported importance given to instructional effectiveness, the satisfaction derived, and student retention?

7. Is there a relationship between the reported importance given recruitment and financial aid effectiveness, the satisfaction derived, and student retention?

8. Is there a relationship between the reported importance given registration effectiveness, the satisfaction derived, and student retention?

9. Is there a relationship between the reported importance given responsiveness to diverse populations, and student retention?

10. Is there a relationship between the reported importance given safety and security, the satisfaction derived, and student retention?

11. Is there a relationship between the reported importance given service excellence, the satisfaction derived, and student retention?

12. Is there a relationship between the reported importance given student centeredness, the satisfaction derived, and student retention?

**Research Question Two**

Did student reports of the importance of selected enrollment factors have a relationship with their decision to enroll?

The secondary research questions are:

1. Is there a relationship between the reported importance given cost and their decision to enroll?

2. Is there a relationship between the reported importance given academic reputation and their decision to enroll?

3. Is there a relationship between the reported importance given financial aid and their decision to enroll?
4. Is there a relationship between the reported importance given the geographic setting and their decision to enroll?

5. Is there a relationship between the reported importance given the size of the institution and their decision to enroll?

6. Is there a relationship between the reported importance given campus appearance and their decision to enroll?

7. Is there a relationship between the reported importance given personalized attention prior to enrollment and their decision to enroll?

8. Is there a relationship between the reported importance given recommendations from family/friends and their decision to enroll?

9. Is there a relationship between the reported importance given the opportunity to play sports and their decision to enroll?

**Research Question Three**

Is there a relationship between student demographics and retention?

The secondary research questions are:

1. Is there a relationship between gender and student retention?

2. Is there a relationship between age and student retention?

3. Is there a relationship between ethnicity and student retention?

4. Is there a relationship between enrollment status and student retention?

5. Is there a relationship between class load and student retention?

6. Is there a relationship between class level and student retention?

7. Is there a relationship between GPA and student retention?

8. Is there a relationship between educational goal and student retention?

9. Is there a relationship between employment and student retention?
Research Question Four
Is there a relationship between initial college expectations, experiences, satisfaction with the decision to attend and student retention?

The secondary research questions are:

1. Is there a relationship between a student’s initial expectation of the college experience and student retention?

2. Is there a relationship between student satisfaction with college experiences and student retention?

3. Is there a relationship between student satisfaction with college choice and student retention?

Hypotheses
The following null hypotheses will be tested at the .05 alpha level.

Ho1 There is no significant relationship between student reports of the importance and their satisfaction with retention factors on the Noel Levitz: Student Satisfaction Survey 4-year College and University Version and their retention at a regional campus.

Ho1a. There is no significant relationship between the reported importance given academic advising, the satisfaction derived, and student retention.

Ho1b. There is no significant relationship between the reported importance given campus climate, the satisfaction derived, and student retention.

Ho1c. There is no significant relationship between the reported importance given campus life, the satisfaction derived, and student retention.
Ho1d. There is no significant relationship between the reported importance given campus support services, the satisfaction derived, and student retention.

Ho1e. There is no significant relationship between the reported importance given concern for the individual, the satisfaction derived, and student retention.

Ho1f. There is no significant relationship between the reported importance given to instructional effectiveness, the satisfaction derived, and student retention.

Ho1g. There is no significant relationship between the reported importance given to recruitment and financial aid effectiveness, the satisfaction derived, and student retention.

Ho1h. There is no significant relationship between the reported importance given registration effectiveness, the satisfaction derived, and student retention.

Ho1i. There is not significant relationship between the reported importance given responsiveness to diverse populations, and student retention.

Ho1j. There is no significant relationship between the reported importance given safety and security, the satisfaction derived, and student retention.

Ho1k. There is no significant relationship between the reported importance given service excellence, the satisfaction derived, and student retention.
$H_{o1}$ There is no significant relationship between the reported importance given student centeredness, the satisfaction derived, and student retention.

$H_{o2}$ There is no significant relationship between student reports of the importance of selected enrollment factors and their decision to enroll?

$H_{o2a}$ There is no significant relationship between the reported importance given cost and their decision to enroll?

$H_{o2b}$ There is no significant relationship between the reported importance given academic reputation and their decision to enroll?

$H_{o2c}$ There is no significant relationship between the reported importance given financial aid and their decision to enroll?

$H_{o2d}$ There is no significant relationship between the reported importance given the geographic setting and their decision to enroll?

$H_{o2e}$ There is no significant relationship between the reported importance given the size of the institution and their decision to enroll?

$H_{o2f}$ There is no significant relationship between the reported importance given campus appearance and their decision to enroll?

$H_{o2g}$ There is no significant relationship between the reported importance given personalized attention prior to enrollment and their decision to enroll?

$H_{o2h}$ There is no significant relationship between the reported importance given recommendations from family/friends and their decision to enroll?

$H_{o2i}$ There is no significant relationship between the reported importance given the opportunity to play sports and their decision to enroll?
Ho3. There is no significant relationship between student demographics and student retention.

   Ho3a. There is no significant relationship between gender and student retention.
   Ho3b. There is no significant relationship between age and student retention.
   Ho3c. There is no significant relationship between ethnicity and student retention.
   Ho3d. There is no significant relationship between enrollment status and student retention.
   Ho3e. There is no significant relationship between class load and student retention.
   Ho3f. There is no significant relationship between class level and student retention.
   Ho3g. There is no significant relationship between GPA and student retention.
   Ho3h. There is no significant relationship between educational goal and student retention.
   Ho3i. There is no significant relationship between employment and student retention.

Ho4. There is no significant relationship between student expectations of college, their experience, their decision to attend and student retention.
Ho4a There is no significant relationship between student expectations of college, their experiences and student retention.

Ho4b There is no significant relationship between student satisfaction with their experiences and student retention.

Ho4c There is no significant relationship between student satisfaction with college choice and student retention.

**Delimitations and Limitations of the Study**

**Delimitations**

1. This study will be restricted to traditional students who were enrolled at one of the five regional campuses or two centers of Ohio University during the 2005-2006 academic year.
2. This study will involve retention from the beginning of the fall quarter 2005 to the fall quarter 2006.
3. This study will treat the regional campuses and centers as a system and not individual entities.

**Limitations**

1. The research concerns retention from one fall quarter to the following fall quarter, providing insight for that time period, but does not extend to following years.
2. This research involves the regional campuses and centers of a single institution and can not be generalized to institutions other than Ohio University.
3. This research includes only those students involved in the original survey who included their identification numbers on the instrument.
4. The instrument is designed for a four-year institution and assumes a residential experience.

5. The research does not account for students who have transferred outside the Ohio University system to continue their educational goals.

**Definition of Terms**

Non-residential: A campus that does not have a substantial housing component.

Open admissions: High school graduates are admitted on regular full-time basis. An official high school transcript or GED (graduate equivalent diploma) is required.

Retention: For the purposes of this study: maintaining or persevering attendance and enrollment from the first year of this study into the second.

College survival skills class: A three-credit class designed to help first quarter enrollees adapt to the academic environment, assess interest, values and abilities; explore academic majors and their requirements; establish education and career goals, and develop skills necessary for college success.

Traditional age student: A student who attends a college or university directly out of high school, typically between 18 and 23 years of age.

Non-traditional or adult student: A student typically 24 or older, who has major life obligations in addition to college enrollment.

Student Satisfaction Inventory: 4-year College and university
version of instrument designed to measure the importance and satisfaction of specific items to traditional age students in a specific environment.

Factors: The enrollment factors that influenced the student’s decision to attend the institution.
CHAPTER TWO: REVIEW OF THE LITERATURE

Attending college is a choice. The decision to stay is voluntary. That is not to say an institution is powerless to affect a student’s decisions. Bean and Eaton (2001) state, that institutional policies and practices do affect rates of student retention, and institutions can create programs and environments that attract and retain students. They go on to say that factors affecting retention are ultimately individual and that individual psychological processing form the foundation of those decisions.

“Retention is an issue of importance for individuals. It impacts their future opportunities. It is an issue for institutions. It impacts the financial success of an institution, the accountability of the institution and the moral commitment to a supportive environment of the institution. Finally, it is an issue for our nation, as it strives to develop a workforce and citizenry to support the future” (Braxton, Hirschy and McClendon, 2004).

The research, theories and conversations surrounding student retention have been focused primarily on one environment: that of the traditional, residential institution. The students in such a model are overwhelmingly traditional college age, attending full time, and if not living on campus specifically live in the college community and away from home (Office of Institutional Research, 2003). The goal of these students is completion of a baccalaureate degree, and the college or university community is well integrated in life outside the classroom (Office of Institutional Research, 2003).

Some research has been done on the community college environment. This is truly a commuter campus situation, with what often is a significant, if not predominantly a non-traditional population. The goals of these students range from taking a class to learn
a skill or skill set (such as a certificate program), to earning an associate degree and/or transfer to another type of institution (Lui & Lui, 1999). The focus of this study will be on a non-residential campus of an open-enrollment, regional campus. The literature specific to that topic is essentially non-existent. The review of literature will be based on the more traditional types available.

**Introduction of the Literature**

Traditional theory, strategies, commuter campuses and Ohio University will categorize the literature. The foundation of the literature reviewed here is from three arms of knowledge. The first are the established experts in the field of retention in higher education based on the theories of Tinto and of Astin. Writings on the first-year experience follow because the research supports that the highest risk of attrition occurs during that time. The final area is research and evaluations done by Ohio University Office of Institutional Research.

**Critical Review of Relevant Literature**

*Tinto’s Theory of Integration*

There has been a great deal of research done in the area of student retention over the past twenty-five years. The focus of that research has been on the traditional residential campus of selective institutions. The challenges of community colleges and open-admission regional campuses are substantially different from those of the residential campus. There is little research specific to the regional campus environment. However, some of the information gleaned from study in traditional situations, and certainly the body of research on community college environments, may explain some of the patterns seen on regional campuses. Tinto (1993) contends there are individually two attributes that stand out as primary roots of departure: intention and commitment. With these two
factors in place, a student is integrated into the educational community; without them, a student has no anchor. Tinto cites these two fundamental reasons as the root of student departure from institutions of higher education. It is our charge to understand how events within the institutions shaped the process of departure. Tinto defined intentions as the goals of the individual. He suggests the stronger the links between the goal of college completion and other valued goals, the greater the likelihood of retention. Tinto argues that departure from higher education mirrors the degree to which the experiences have served to integrate the individual into the social and intellectual life of the institution: “The absence of sufficient contact with other members of the institution proves to be the single most important predictor of eventual departure, even after taking account of the independent effects of background, personality and academic performance” (Tinto, p.56). Tinto views student departure as a longitudinal process that occurs because of the meanings the individual student ascribes to his or her interactions with formal and informal dimensions of a given college or university (Braxton, Hirschy & McMlendon 2004, Braxton, Sullivan, Johnson 1997, Tinto 1986, 1993).

The integration model proposed by Tinto spotlights the position that the increasing number of students who fail to complete, “cost the universities scarce resources, weaken the ability of the university to meet educational objectives; [sic] the perception of the schools ability (or lack there of) to meet the educational, social and emotional needs of the students” (Mangold, Bean, Adams, Schwab & Lynch, 2002, p. 96). Mangold et al., postulate a model of mentoring and block scheduling (i.e. Learning communities) will result in increased retention and completion rates assuming incoming students possess a set of individual traits. Those traits combined with their commitment to the process of
higher education influence their academic and social integration. Academic integration appears to be the single most important type of student involvement that affects retention as well as having the strongest positive influence on retention when social integration is relatively low. As social integration increases, the positive influence of academic integration appears to diminish somewhat. At two-year institutions social involvement has a smaller effect and academic has a greater effect on retention. From a professor’s perspective, isolated alienated freshman are often unresponsive in and out of the classroom.

**Tinto’s Sociological Model**

Tinto’s sociological model has been the dominant guide for research on college student departure (Okun, & Finch, 1998), but numerous social psychological theories have been used to explain departure. Early research compared the personality traits of students who persisted and those who dropped out. Non-persisters were characterized as more anxious and worried, less able to control irrational anxieties, more non-conforming and resistant to authority; persisters were depicted as more responsible and flexible (Okun, & Finch). In the 1980s five major dimensions of personality emerged. They were extraversion (social, assertive, talkative and active), agreeable (trusting, cooperative, forgiving), neuroticism (anxious, worried, angry, insecure), conscientiousness, and openness to experiences (Okun, & Finch). Tinto (1987) posited that integration into the academic system of college is the primary deterrent of changes in goal commitment, whereas integration in the social system of college is the primary determinant of changes in the institutional commitment. Institutional commitment refers to how loyal a student feels toward a college. Social integration refers both to the quantity and quality of students’ interactions (Tinto, 1987).
Okun and Finch (1998) hypothesized that high subjective social integration will be associated with low level of neuroticism. They continued that those higher on objective indicators of social integration will tend to be higher on subjective social integration. Finally, extraversion and agreeableness will exert indirect effects on subjective social integration through their influence on organizational involvement and number of friends (Okun, & Finch 1998). Discussion of the study determined that personality dimensions contribute substantially to the prediction of institutional departure. The role of personality dimensions on the process of institutional departure as found in the Okun and Finch study reached two conclusions: (1) Neuroticism was the strongest negative predictor of subjective social integration (Okun, & Finch), and as neuroticism increases, first-time students are less likely to have made adequate adjustment to the social demands of starting college. (2) Initial institutional commitment was the second strongest predictor of subjective student integration. Students with higher levels of initial institutional commitment were more likely to perceive themselves as being integrated into the social system (Okun, & Finch). They went on to hypothesize that conscientiousness, openness to experience and intuitional commitment would predict cumulative GPA; conscientiousness exerted a direct effect on cumulative GPA; openness did not. Okun and Finch also hypothesized GPA and institutional commitment would be inversely related to institutional departure. By far, the strongest predictor of institutional departure was cumulative GPA. As GPA increased, the likelihood of leaving decreased. Over all, the results suggest conscientiousness has the largest effect on departure (Okun, & Finch).
**Tinto’s Separation Model**

Elkins, Braxton and James (2000) looked specifically at Tinto’s separation stage as it influenced first-semester students. They related that Tinto found the first step of separation was potentially difficult, particularly for those individuals whose home communities seriously question the value of attending college. Those students must be willing to reject the values of their past communities if they are going to persist from the first to second semester. Students experience the stages of separation, transition, and incorporation that ultimately influence the student departure decision (Tinto). The support of parents, other family members and friends in the student’s home communities can provide encouragement and reinforce the student’s decision to attend college. Elkins, Braxton and James found that the greater a student’s initial level of institutional commitment, the more likely the student is to perceive a need to reject attitudes and values of past communities. The separation dynamics are particularly important for first-generation students. Elkins Braxton and James noted that it was critical to understand how important the support and/or rejection of attitudes and values are to retention. First-semester students who successfully pass through the stage of separation are more likely to return for a second semester. The separation stage of Tinto’s stages, if incorporated into the membership of communities of college and universities tend to possess construct validly (Elkin, Braxton & James).

**Astin and Tinto**

One aspect to consider in developing strategies of student retention is Astin’s I-E-O (Input-Environment-Output) model (1994). According to this model, a student’s input (I), the characteristics a student has when entering college, combined with environment (E), the factors in college that affect the student experience (such as,
policies, programs, academics, peers and organizational structure) influence the outcome (O), or the results of that experience. These, in addition to the institution’s size, residential experience, faculty, administration, personnel and friends, can have a tremendous impact on the retention of a student (Chickering, 1965). Tinto states that the more satisfying the experience a student has, the more likely he or she is to stay. Heywood (2000) continues to reflect from Tinto’s perspective: the more a student integrates into the educational system, the more likely he or she is to stay. Heywood (2000) quotes Tinto as saying “the social and academic integration occurs when the student comes to share the normative attitudes and values of peers and behaves as required in the formal and informal structure of the institution” (p.127).

Berger and Milem (1999) define the key underpinnings of their integrated model of college retention from Astin and Tinto’s concepts of integration and involvement. Astin suggests that factors contributing to a student’s departure from college suggest a lack of involvement. Tinto (1993) goes one step further to support the role of student involvement in promoting positive educational outcomes for college students. These investigations seek to further our understanding of the relationship between behavioral involvement and perceptual integration in the college retention process. Astin (1994) indicates that the most potent forms of positive involvement lie with academics as well as with faculty and student peers, while non-involvement with campus life has a powerful negative impact on student outcomes. Davis found that increased interaction with peers is the most potent form of positive involvement, while non-involvement with campus life has a powerful negative impact on student outcomes (Berger & Milem, 1999). Berger
recognized that involvement along with student perceptions of integration is an important
contributing factor in college student retention.

Results of the study by Berger and Milem (1999) confirm the utility of using a
combined model that accounts for both the behavioral and perceptual components to
describe process during the first year of college. The cycle of involvement behaviors
related that involvement with faculty in the fall had a significantly positive effect. The
pattern of positive direct effects suggests that early involvement with faculty increases
the likelihood that students will have positive perceptions of instructional support and
subsequent institutional involvement (Berger & Milem, 1999). However, Berger and
Milem, go on to state that fall faculty involvement has a negative direct effect on
perceptions of peer support, indicating that students who are not fitting in socially are
turning to faculty for a source of support. According to Berger and Milem, early peer
involvement appears to strengthen perceptions of institutional and social support and
ultimately retention. Positive perceptions of peer support also have positive total effects
on subsequent institutional commitment and retention. However, positive perceptions of
institutional support have a negative effect on peer involvement in the spent. The
conclusions suggest that faculty may play an important role in the student retention
process, particularly for those students who are not fitting in socially.

The conclusions of the study by Berger and Milem (1999) support Astin’s and Tinto’s
theories of retention. The findings strongly support the inclusion of behavioral
involvement components, in addition to the traditional use of perceptual measures, to
help increase our understanding of college-student retention. Berger and Milem found
that their findings demonstrated that the variables included in their model have important
indirect effects on the process of integration and direct effects on the process of integration and retention. The findings suggest that further investigation of the relationship between student behavior and perceptions could help explain a wide variety of social phenomena and outcomes. Finally, their use of an actual measure of retention greatly increases the validity of the findings associated with this model.

Yorke and Longden (2004) discuss three propositions as they relate to the commitment of the institution to student welfare. First, the greater the level of institutional commitment to the welfare of the student, the more likely social integration is used to illustrate the institutional commitment leading to increased student retention. Second, the greater the level of institution integrity, the more likely a student is to achieve social integration confirming the institutional commitment and resulting in increased retention. Finally, the stronger a student’s perception of communal potential, the more likely a student will achieve increased levels of social integration illustrating the institutional commitment and increasing student retention (2004).

**Upcraft and Gardner’s Research of First Year**

Upcraft and Gardner (1989) noted that students leave for a combination of complex reasons: academic boredom, sense of irrelevance, limited and unrealistic expectations of college, academics, under-preparedness, transition difficulties and uncertainty about career choices. They reflected successful first-year students are satisfied that their learning will be useful later in life. Upcraft and Gardner (1989) note that efforts to improve freshman retention must then focus on helping them make an academic, personal and social adjustment to college. One of the strategies that Upcraft and Gardner (1989) discuss is making the “freshman connection.” Building into the academic system a vehicle that will help first-year students connect with the
environment, make the transition to college, work toward their goals, and succeed in the classroom leads to social integration. It is vital to help new students make the transition from feeling like outsiders to feeling personally involved and socially integrated. Upcraft and Gardner (1989) continue by noting that the single-most-important step is to ensure every freshman feel attached to some person. They indicate that freshmen who can name a campus-affiliated person they can turn to with a problem are more than twice as likely to return the following year!

Barefoot, Gardner, Cutright et. el. (2005) set standards to identify institutes of excellence in the first year of college. They identified five criteria on which to base their selection. The first of the criteria is evidence of an intentional, comprehensive approach to improving the first year that is appropriate to an institution’s type and mission; second, evidence of assessment of the various initiatives that constitute an approach; third, a campus that has a broad impact on significant numbers of first year students, including, but not limited to special student sub-populations; four, a campus with strong administrative support for first year initiatives and evidence of institutionalization and durability over time; fifth, involvement of a wide range of faculty, student affairs professionals, academic administrators and other constituent groups (2005, p. 5-6).

Looking at the institutions identified, twelve common threads were found. First, institutions that achieve first year excellence place a high priority on the first-year among competing institutional priorities and accept a significant share of the responsibility for first year achievement. Second, leadership operating on multiple levels is essential to the achievement of excellence. Third, excellence flourishes in a culture that encourages idea generation, pilot projects, and experimentation. Fourth, excellence in the first year is
achieved through efforts designed for all or for a critical mass of first-year students. Fifth, assessment is an essential component of moving toward and sustaining excellence. Sixth, of the campuses that achieve first-year excellence, a common characteristic is clarity of institutional identity and mission and a concomitant respect for students. Seventh, excellence in the first year relies on the direct involvement of an institution’s faculty. Eighth, excellence in the first year requires attention to pedagogy in first-year courses. Ninth, first-year excellence necessitates both creative acquisition and judicious use of financial resources. Tenth, a central component of excellence is a steady outward gaze, the willingness to learn from and share with others. Eleventh, excellence rests on an intentional first-year curriculum and on supportive curricular structures. Twelfth, excellence thrives in an environment where divisional walls are down (2005, p. 381-392).

The authors concluded with a number of suggestions for campuses interested in first year students and first year programs. First they suggest the campus conduct a major self-study of the first year using all the stakeholders in the process. Second they suggest the campus measure current practice with the five selection criteria. Third they suggest the campus evaluate their first-year against the programmatic areas of emphasis (advising, common reading et al). Fourth they suggest the campus create a discussion group and open communications around first-year themes. Fifth they suggest the campus consider the first year as a focus for reaffirmation of accreditation (2005, p394).

M. Lee Upcraft and John Gardner do agree that progress has been made over the past 20 years (2005). Certainly there has been an increase in the campus-wide, national and international conversation and action surrounding the first year of college. Institutions clearly have come to understand that it is not economical to admit students
and hope they make it. Institutions understand that students need support and challenge as well as commitment to help them succeed (2005). There are three principles of retention (Upcraft, Gardner, et al, 2005, Tinto 1993). First, effective retention programs are committed to the students they serve. Second, effective retention programs are first and foremost committed to the education of all, not just some, of the students. Last, effective retention programs are committed to the development of supportive social and educational communities in which all students are integrated as competent members (2005).

Upcraft, Gardner and associates make numerous recommendations to improve the first year of college for students, and increase retention (2005). They include creating an institutional mechanism or structure for over site of the first year, structuring numerous opportunities for informal interaction between first-year students and faculty, selecting first year faculty carefully and providing development opportunities, understanding the impact of class size on retention and academic performance, investigating the impact of developmental courses on student readiness for regular curriculum, and considering the impact of attendance policies, or lack there of, on first-year student’s patterns of classroom attendance. In addition they recommend that two-year institutions should invest more in the first year across the board and should not forget the influence of families. Finally two-year institutions invest in assessment; know what works on your campus (Upcraft et al 2005).

**Other Theories**

John Braxton (2000) assembled a review of theories to describe student characteristics that related to the individual’s commitment to the institution and the goal of college completion. Of course, this view was again related to the traditional experience, but can
be expanded to acknowledge some of the situations at a commuter campus. First, attitude-behavior theory by Fishbien and Ajzen linked the beliefs, attitudes, intentions and behavior of students (Fishbien & Ajzen, 1975). Fishbien and Ajzen defined “attitude” as the individual’s evaluation of an object. They defined “belief” as a link between an object and some attribute, and defined “behavior” as a result or intention (Fishbien & Ajzen). Coping behavior theory summarized that student adjustment can be viewed as the process by which an individual acquires “goodness of fit” (Fishbien & Ajzen). Bandura states that the self-efficacy theory says individuals acquire a perception of their ability to perform a particular task or deal with a particular situation based on past experience and observation (Bandura, 1696). In conclusion, Bandura (1969) summarized eight cultural propositions about premature student departure. The first cultural proposition says the college experience (including a decision to leave college) is mediated through a student’s cultural meaning-making system. Second, one’s culture of origin mediates the importance attached to attending college and earning a college degree. Third, knowing a student’s culture of origin and the cultures of immersion is needed to understand a student’s ability to negotiate successfully the institution’s cultural mile. Fourth, the probability of retention is inversely related to the cultural distance between a student’s culture of origin and the cultures of immersion. Fifth, students who transverse a long cultural distance must become acclimated to a dominant culture of immersion or join one or more enclaves. Sixth, the amount of time a student spends in a culture of origin after matriculating is positively related to cultural stress and reduces the chances the student will persist. Seventh, the likelihood a student will persist is related to the extensity and intensity of one’s socio-cultural connection to the academic program.
and to affinity groups. Eighth, students who belong to one or more enclaves in the
culture of immersion are more likely to persist, especially if group members value
achievement and retention.

Lounsbury and DeNeui (1994) researched the impact of the psychological sense
of community on campus. They concluded that a sense of community was important as
it related to student well being.

The motivation to persist was also the focus of a study completed in 1999 by
David Allen. He looked at the relationship between factors of motivation, student
background, academic performance and retention. Allen’s research purported to assess
the direct and indirect effects of motivation on retention behavior and academic
performance in college. Secondly, he wanted to determine the extent to which
motivation differed in its impact on retention and academic performance for minorities
and non-minorities. Allen discussed the assertion that background variables and the
desire to finish college played key roles in the retention process. Three of seven
background variables had an impact: pre-college academic ability, parents’ education
and financial aid (Allen, 1999). The literature has consistently asserted that background
variables, especially in the form of pre-college characteristic, may play a major role as
an explanatory variable that account for differences in retention rates between minorities
and non-minorities. Allen stated that his study empirically verified the conventional
wisdom that motivation may affect the behavior of some sub-groups and is responsible
at least in part for influencing academic achievement. His findings suggest the
possibility of theoretical linkages between pre-college motivation factors and student
departure. Allen found that pre-college ability had a significant impact on college
success and retention. He felt this research was significant in that it supported the position that motivation may affect the behavior of students, as well as, influence academic achievement (Allen).

“The success of an institution and the success of its students’ retention to the completion of educational goals is a key indicator of student satisfaction and success” (Levitz, Noel & Richter, 1999). Retention is an individual performance indicator; retention is an institutional performance indicator (Levitz, Noel & Richter, 1999). Retention is not the primary goal but is the best indicator an institution has that it is meeting its goal of student satisfaction and success. “It is a measure of how much student growth and learning takes place, how valued and respected students feel on campus and how effectively the campus delivers what students expect, need and want” (Levitz, Noel and Richter, 1999 p. 31)). The term “student centeredness” describes the concept and spirit of campuses that were truly focused on student needs. Positive retention rates were the result (Levitz, Noel and Richter, 1999).

Bank, Biddle and Slavings (1992) researched the concept that student expectations will predict who persists in college and who does not. The expectance value theory stresses that an event will be viewed positively if it is believed to lead to the desired outcomes. The research was guided by the supposition that satisfaction rather than behavior, could be predicted, and one would follow the other (Bank, Biddle & Slavings, 1992). The findings were rather surprising. First, Bank, Biddle and Slavings found that what a student hopes for when they enter a university often has little to do with the college experience. Many of student’s hopes and expectations were social or personal and could or might have been satisfied outside the college environment. Secondly, there
seems to be a weak relationship between the students’ expectation and retention (Bank, Biddle and Slavings, 1992). Bank, Biddle and Slavings (1992) theorize that their findings may be a better predictor of behaviors in a particular setting when it takes in account alternative settings. Thus when predicting student retention it may be less important to know how likely students think they are to realize particular goals at a given campus than to know whether their expectancies are higher for that campus than for other settings. Kuh (2001) discusses the gap between expectation and experience and suggests an institution get to students early with realistic information. Additionally, the institution should build programs and services that encourage student engagement in their own education.

Boulter (2002) first hypothesized that a college student’s self-perception of their intellectual ability and ability to make friends in general would predict academic adjustment. The self perception of intellectual ability was a positive influence on adjustment in college for both men and women, as predicted. The second hypothesis proposed that instructors and close friends as sources of social support would predict academic adjustment. As expected, results showed that the student’s perceptions that their instructors care and support them are positive.

Linquest, Spalding and Landrum (2002) viewed the impact of faculty attitudes and behaviors on college student’s thoughts about leaving a university. In this research a sample of 729 undergraduate students of various class standings were surveyed on 19 faculty attitude and behavior statements with a 4-point Likert-type scale followed by demographic and open-ended questions. Students were surveyed over a five-day period
during various hours and in numerous locations around campus to obtain a diverse sample.

Gender was significant in the sample with females being more prone to leaving the university than males due to a particular faculty attitude or behavior (Linquest, Spaulding & Landrum, 2002). The study found that the students’ response to the question “I have thought about leaving the university because of faculty attitudes and behaviors” was best predicted by their values on three items as determined through multiple regression analysis. Those values were focused on the following: a lack of student support from faculty, faculty members who do not return phone calls or e-mails in a timely fashion and professors who seem unapproachable (Linquest, Spaulding & Landrum, 2002).

The researchers concluded that their study did present evidence that faculty attitudes and behaviors did affect retention (Linquest, Spaulding & Landrum, 2002). As a result the authors suggest that faculty can significantly contribute to student retention by using the following strategies: being supportive of students’ needs, returning phone calls and e-mails in a timely manner, and being approachable. The researchers concluded that females are more prone to self-doubt than males, and freshman were least influenced by faculty attitudes and behaviors (Linquest, Spaulding & Landrum, 2002). They close in saying that “faculty members need to know that their influence spans across the educational domain, not only are they involved in knowledge delivery, but they also influence the student’s larger choice of whether or not to remain in school” (p. 132).

Edwards and Camgemi (1990) viewed the characteristics of the college dropout as a result of the interaction between the student, the institution, and interpersonal variables.
Their research echoed what others had noted. Persisting students were more mature, flexible, and selective in choosing their school, and more certain about their goals. Edwards and Camgemi demonstrated better study habits, self-management and self-discipline, greater parental support and financial security. Additionally, Edwards and Camgemi stated students who had less parental pressures, higher aspirations, greater endurance, and a strong interest in school tended to achieve greater intellectual and academic abilities (Kowalski, 1977). Dropouts were found to have immature attitudes and perceptions, low-level achievements, low-level goals, a lack of initiative, an inability to make decisions and organize themselves, and little introspective ability. One problem was the conflict between what the college environment expects from the student and what the student expects from life and the world (Edwards and Camgemi). Finally, Edwards and Camgemi noted that the absence of positive relationships between students and professors proved to be a problem of considerable magnitude.

**Strategies**

The University of Arkansas piloted a program called FAST (freshman academic support tracking). The students in FAST met for nine hours of class-work in the fall and an additional six in the spring, both supported with weekly meetings with their mentor (Mangold et al., 2002). The results of the program were impressive. It answered affirmatively both the question of the program increasing graduation and retention rates. It was also concluded that high school grade-point average has a positive correlation with the likelihood of graduation and had a negative effect on dropping out. Additionally students taking a light course-load are less likely to graduate and more likely to drop out than their peers (Mangold et al., 2002).
Mangold outlines some intuitional practices grounded in empirical research that can impact student departure. The practices are outlined in nine areas. The first area is academic advising; advisees should consider the teaching practices of instructors as instructors positively influence social integration, and advisors should encourage membership in social communities of the institution. The second area concerns administration; administrators should communicate rules and regulations important to students effectively and should enforce them in a fair manner. The third area is social opportunities; commuter colleges should develop social environments for students; residential campuses should develop social environments for commuter students. The fourth area is enrollment management; recruitment activities should accurately portray the school and should encourage students to visit the campus. The fifth area is faculty development; faculty development should focus on cooperative/collaborative learning and active learning. The sixth area is faculty reward system; some weight should be given for using teaching skills of organization, preparation, instructional skill and clarity and these factors should be appraised on the student course rating instrument. The seventh area is student orientation; student orientation should provide multiple opportunities for first-year students. The eighth area is residential life; hall assignments should encourage a second sense of community and should provide opportunities to interact socially. The ninth area is student affairs programming should conduct workshops on coping with stress, and educational and career planning and should honor the history and culture or racial and ethical groups on campus (Mangold et al., 2002). Again, clearly these are strategies and practices that focus on a residential situation which would need significant adjustment to accommodate a non-residential environment.
It is echoed over and over again that retention is not a one-person, quick-fix concern. To begin to be successful, retention needs to be addressed programmatically, crossing the boundaries of departments, division and roles. One might argue that high retention rates may be reflective of a campus philosophy and environment as a whole. How, then, does one evaluate retention? The process of assessment cutting across programs is a challenge. Borland (2001) postulates that the evaluation of retention programs should be relative to the purposes, outcomes, measurement, evaluation and decision making of the program. Borland’s model is grounded on the principle that all evaluation is purpose based, formative, action orientated, and iterative (Borland, 2001).

Borland (2001) identifies three different paradigms involved in student retention. The first is the learning paradigm provides student with the formal college-specific opportunities that enhance their learning. The second paradigm is the development paradigm which provides students with the formal and informal college-specific opportunities for students to develop as human beings. Third, the economics paradigm focuses on maintaining enrollments and positively impacts economic status of the institution.

Berger (2001) recently approached the topic of retention and how to improve it from an organizational prescriptive. Berger defined organizational behavior as a multi-dimensional construct with five core dimensions: “Bureaucratic” emphasizes the rationality in organizational decision making through the use of formal structure. “Collegial” describes behavior in terms of collaboration and consensus. “Political” illustrates the competition for resources within the system. “Symbolic” relates to the traditions that create meaning in the organization. Finally, the “system” suggests that
what happens inside an organization can best be understood when the interaction with the external environment is understood (Berger, 2001).

Berger’s research resulted in ten recommendations to improve student retention in their undergraduate studies. The first recommendation is to provide students with information and clear lines of communication about campus goals, values, policies and procedures. The second recommendation is to provide opportunities for students to participate in organizational decision-making. The third recommendation is to provide a campus environment characterized by fairness toward students. The fourth recommendation is to provide balance between structure and responsiveness. The fifth recommendation is to engage students in political activity on campus. The sixth recommendation was to provide students with advocates. The seventh recommendation is to build shared meaning through authentic symbols that are used with integrity. The eighth recommendation is to pay attention to structural and symbolic connections with the external environment. The ninth recommendation is to understand the nature of the organizational environment on campus. The final recommendation was to assess student perceptions of organizational behavior on campus. He concludes that the patterns of organizational behavior in colleges and universities have important consequences for the retention of undergraduate students (Berger 2001).

Boulter (2002) noted that successful adjustment to college during the first year is an area of increasing concern of most institutions of higher education. It is critically important to understand the complex forces that influence successful academic adjustment during the first year. Two types of factors relate to whether or not a student remains in college: individual factors and interaction factors (Boulter, 2002). Student
attitudes about going to college, values, sense of purpose and sense of interdependence have a direct influence on academic achievement. Interaction factors are experiences the student has after entering the institution, including the quality of the individual interactions with other members of the institution and the extent to which these interactions are perceived by the individual to meet his or her needs and interests. College students’ self-worth may be more heavily influenced by the extent to which they are achieving goals in areas that are important to them than by the positive regard of significant others (Boulter).

Rosenthal (1995) investigated the role of social support networks of residential and commuter students at an urban college. He postulated that the most important criterion for staying in college is the student’s social support network. Skahill (2002) questioned the degree of the social network connection. His position was “commuter students may be able to maintain their networks outside of school, and form few new relationships within the school environment. Students who relocate must leave social relationships behind and develop new ones” (Skahill, 2002 p.41). So, Skahill questions “does the foundation of an existing social support network afforded to commuter students provide them with greater probability of success than the students who relocate to attend school, or does the formation of new social networks that have a greater connection facilitate the adjustment to the new college environment more efficiently?” (Skahill, 2002 p.41). While it is thought that students will experience growth in their social support network, as it resulted, there is no significant change. In this instance the residential students reported the greatest decline in their social network density. They also reported
the greatest number of new friendships. Those students who reported more friendships connected to school were also more likely to report feelings of success (Skahill, 2002).

Schultz, Dickman, Campbell & Snow (1992) noted that “regardless of the causes for a student’s academic difficulty and subsequent attrition, institutions need to provide programs more responsive to student needs” (p.44). This responsiveness can be implemented by helping target students as early as possible to develop realistic perspectives concerning academic demands and by providing services that facilitate development of the student’s interpersonal and communication skills (Schultz, Dickman, Campbell & Snow, 1992). The authors proposed a model with the following components might be successful. The model should permit students to develop discipline; should help students understand academe; should improve their study skills; should manage their emotions and relationships; and should support the development of skills in communication, assertiveness, decision-making and values clarification.

**DEEP**

Documenting effective educational practice (DEEP) is a result of research done by George Kuh, Jillian Kinzi, John Schuh, Elizabeth Whitt and associates (2005) identifying colleges and universities that did well in the areas of student engagement and graduation rates. Among the respected engagement indicators are those found in “Seven Principles for Good Practice in Undergraduate Education (Chickering & Gamson, 1987). Those indicators are (1) student-faculty contact, (2) cooperation among students, (3) active learning, (4) prompt feedback, (5) time on task, (6) high expectations and (7) respect for diverse talents and ways of learning. Twenty colleges and universities were identified as DEEP institutions. Common among them are six features that support
retention and student engagement: a “living” mission and “lived” educational philosophy, an unshakeable focus on student learning, environments adapted for educational enrichment, clearly marked pathways to student success, and an improvement-oriented ethos.

All twenty institutions shared two characteristic: a clearly articulated educational purpose and aspiration, and a coherent, relatively well-understood philosophy that guides “how we do things here.”

A number of primary and secondary recommendations can be gleaned from the practices of the Documenting Effective Educational Practice (DEEP) institutions. First, feature student success in the institutions enacted educational mission and purposes. Documenting Effective Educational Practice schools featured students’ success in their visions of what DEEP schools aspired to accomplish with their undergraduate program. The schools clarify and translate the mission in plain language to stakeholders. The schools ensure that the espoused mission is enacted and that senior leaders must publicly and repeatedly champion undergraduate education. DEEP schools strive to balance appropriately the institution’s multiple missions.

A second primary recommendation of DEEP schools is to make talent development a central tenet in the initiation’s operating philosophy. To achieve this, an institution should establish high expectations for everyone should know its students and should set performance standards for students at high but attainable levels consistent with the student’s academic preparation. In addition, colleges should provide generous amounts of helpful, constructive feedback, and balance academic challenge with adequate support. Finally, colleges should use pedagogical approaches that complement students’ learning
styles and should encourage the types of student-faculty interactions that pay dividends in terms of student development.

Another primary recommendation of DEEP schools is to cultivate an ethic of positive restlessness. To achieve this, colleges should steer the organization toward continuous improvement, should use data to inform decision making and should “sunset” less effective programs and activities in order to support high-priority initiatives. Perhaps elementary, colleges should put someone in charge.

The next primary recommendation of DEEP was to put money where it will make a difference in student engagement. That means to invest in activities that contribute to student success, to invest in faculty members who are doing the right things, to invest in teaching and learning centers, to invest in opportunities that allow students to apply what they are learning in ways that also benefit others and to consider a budgeting model that privileges student learning processes and outcomes.

The fifth primary recommendation made by the DEEP schools was to feature diversity, inside and outside the classroom. To achieve this goal, DEEP schools recommend using a multifaceted, aggressive approach to diversity the study body, faculty, and staff. In addition DEEP schools should ensure that diverse perspectives are represented in the curriculum.

The next primary recommendation was to attract and to reward socialized and competent people. To be successful, the DEEP schools suggested that they align the reward system with the institutional mission, values and priorities. Institutions should be cognizant of and should select pick institutional leaders right for the times, for campus culture and for institutional trajectory. The institution should recruit faculty and staff who
are committed to student learning. The institution should emphasize student centeredness in faculty and staff orientation. The institution should make room for differences and ensure high-quality student support services.

The seventh recommendation made by the DEEP schools was to encourage collaboration across functional lines and between the campus and community. This DEEP recommendation is achieved by encouraging and rewarding cross-functional activities focused on student success. The institution should tighten the philosophical and operational linkages between academic and student affairs and should harness the expertise of other resources. The institution should make governance a shared responsibility and should form partnerships with the local community.

The eighth recommendation made by the DEEP schools was to lay out the path to student success. The administration should draw a map for student success. The institution should be sure to front-load resources to smooth the transition and to align the physical environment with institutional priorities and goals for student success. The DEEP institutions recommend you teach newcomers about the campus culture and create a sense of special-ness about being a student here. If an activity or experience is important to student success, the institution should consider requiring it. Finally, the institution should develop interventions for under-engaged students.

The final primary recommendation from the DEEP schools is to re-culture the institution for student success. To do this, institutions should identify cultural properties that are obstacles to student success and should expand the number of cultural practitioners on campus (2005).
Adult Students

The issues facing the adult student are complex, but the solution seems the same. Upcraft and Gardner (1989) refer to Schlossberg and associates when he talks about “creating a place to matter” for adult students. The model for adult learners includes services and programs that are organized to help adult students enter, move through, and complete college successfully, with special attention given to the unique needs and priorities a non-traditional student brings with him/her (Upcraft & Gardner, 1989). Most important is communicating that the student matters to the institution and staff. Understanding and validating the challenges of balancing a family life, work life and academic life is not what a traditional student faces, but what the non-traditional adult student lives with everyday. There is not an expectation that the rules should change to accommodate those additional challenges, but an acknowledgement that they are there to be overcome. Ultimately, the student is more likely to persist if a staff person, administrator or faculty knows and understands those challenges a non-traditional student is facing. The importance of the personal connection is repeated again (Upcraft & Gardner). The single-most-important factor for non-traditional students is the same as for traditional students: non-traditional students should take the time to make sure that students know someone at the institution knows who they are.

First to Second Year

The focus of much of the research is on the first to second year because that is the most vital in indicating graduation rate (Williford & Rudy, 1998). Nationally, freshmen enter college with anxiety and apprehension over beginning a new educational venture. They also bring complex educational and personal issues that require support services. Most in academia tend to assume that virtually all students are ready to succeed and to
Persist not necessarily a reality. Getting students started on the right foot begins with anticipating and meeting their transition and adjustment needs as they begin. Research has shown that on the surface students identify money, time, and personal reasons for leaving an institution. When looking below the surface, investigation indicates the following five broad areas as reasons: personal (stressed, undisciplined, insecure), social (alienation, isolation, uninvolved), academic (unprepared, poor study habits, lacking goals), life issues (financial, time conflicts) and institutional (negative experiences-run a round) (Levitz, Noel & Richter, 1999).

Levitz, Noel and Richter (1999) developed a Retention Management System (RMS) with a long-term approach that included the following components: highly structured system, extended program with intensive contact with students, interlocks with other programs and services, strategy of engagement, qualified staff, critical role for faculty, and focus on cognitive and affective needs of students. Developing a retention plan is the first step. That plan and resulting strategy incorporate the components as noted by Levitz, Noel and Richter should increase the success of the programs.

Szafran (2001) found that students who register for more credits tend to earn higher grade point averages and to have greater retention; however, students registering for more difficult courses earn lower grades and experience lower retention rates. Two theories presented were (1) “that the credit load may impact grade point average and retention because credit load represented a student’s commitment to academics” (Szafran, 2001 pg. 46), and (2) that an advisor’s recommendation a student take a light academic load may be perceived as a judgment of their ability and may function as a self-fulfilling prophecy (Szafran, 2001).
DeBerard, Spielmans and Julka (2004) studied predictors of academic achievement and retention among college freshman. Their research examined a variety of variables that may predict retention as well as potential risk factors. While the research on the effects of gender is inconsistent, this study hypothesized that males would have lower academic performance and higher attrition in the freshman year than females (DeBerard, Spielmans & Julka, 2004). High school GPA was predicted to result in higher academic performance and lower attrition (DeBerard, Spielmans & Julka, 2004). Social support, coping strategies and health-related practices were also included.

This student surveyed 204 undergraduate students from a private university. Participants were voluntary, 72% of them female with a mean age of 18.9 years. The research was approved by the institution’s review board, and students completed the surveys during class time of the first week of classes (DeBerard, Spielmans & Julka, 2004). Three instruments were used, the first being the multidimensional perceived social support scale (MPSSS), a 12-item scale with a 7-point Likert-type format. This study used the total value. The second instrument used was the Ways of coping checklist-revised (WOC). Only two of the eight subscales were included in this research, those being accepting responsibility and escape avoidance. The health-status factors were assessed through the short-form health survey with some additional questions included (DeBerard, Spielmans & Julka, 2004).

The results of this study showed that the predominantly female sample had an average high school GPA of 3.56; 87.3% were non-smokers; 64.2% were non-binge drinkers (DeBerard, Spielmans and Julka, 2004). The health scales reflected the sample was in good health. Of the 204 freshman in the sample 31 (15.2%) were not retained past
the completion of their freshman year. The mean GPA for retained students was 3.10 and for non-retained students was 2.50 (DeBerard, Spielmans & Julka, 2004). An independent sample t-test determined these results were statistically significant. The predictor-criterion correlations determined that GPA at the close of freshman year related to 9 out of 10 hypothesized predictors the first five were; gender, high school GPA, smoking, binge drinking and the psycho-social variables (DeBerard, Spielmans and Julka, 2004).

The study has some potential, the authors believe, to identify proactively students at high risk for poor academic performance. According to the authors, the only statically significant correlation of retention was low high school GPA (DeBerard, Spielmans & Julka, 2004).

This study showed coping as a significant predictor. Blaming oneself, or acceptance-focused coping related to poor academic achievement, but the authors state that “more research is needed to examine how different means of coping may impact academic success” (DeBerard, Spielmans & Julka, 2004p.7). In agreement with prior research, this study found social support as a significant independent predictor of academic achievement (DeBerard, Spielmans & Julka, 2004). The authors concluded that while their study was able to predict academic achievement, it was not able to predict college student retention (DeBerard, Spielmans and Julka, 2004)

In Helping College Students Succeed, Mary Anne Guitar was quoted as saying “We have to stop being teacher-centered and become student-centered. It is not what you think they need, but what they think they need” (Hirsch, 2001, pg. 1). Hirsch discussed both the investment the student must make and the investment the institution must make.
The student needs to take responsibility to learn, to use effective study skills, to attend
class, to allow appropriate time and effort into meeting class requirements; the institution
must take the responsibility provide effective teaching and the necessary learning
resources and guidance (Hirsch, 2001). It is possible for institutions to provide cost-
effective, resource-effective programs. Those programs would encompass the following
components: a holistic approach to diagnosing the causes of academic difficulty,
interventions that take into account the student’s motivation and readiness for change,
individualized interventions for specific types of academic difficulty, and those
interventions that combine study and learning skills development with cognitive and
affective approaches to helping students overcome barriers to success (Hirsch). To
support these suggestions, Hirsch reviews four learning styles with strategies to use those
learning styles most effectively (2001).

Howard and Jones (2000) studied the effectiveness of a freshman seminar in an urban
university. Specifically this study investigated the effectiveness of a freshman seminar in
enhancing the student’s overall perception of being prepared for the university
experience, satisfactory selection of a college major, general confidence as a student,
knowledge of campus resources and study skill competence. The concern addressed by
the seminar is retention. It seems reasonable to assume that in many instances the
decision to leave rests simply on the student’s lack of success in the setting (Howard and
Jones). Researchers found that the students who took the freshman seminar courses had a
higher sophomore retention rate (Howard and Jones). Participation results increased
knowledge about campus services and activities. Studies suggest a link between
participation in a freshman seminar and higher eventual grade point averages and found
that students enrolled in a freshman seminar course earned significantly higher GPAs than non-participants and report more out-of-class contact with faculty (Howard and Jones). Howard and Jones (2000) made four additional conclusions, the first being grades earned in freshman seminar were better predictors of academic achievement and retention than high school rank and SAT values. Second of all, of the students who did not return, nearly 80% reported that there had been no meaningful personal contact with any campus office, faculty or staff member. Third, the objective of the freshman seminar course is to provide students with critical thinking skills, writing skills, information and experiences that will improve their academic success rate and to help students in developing realistic academic and career planning goals. Finally, statistically significant growth was evident in questions associated with college preparedness confidences as a student, in knowledge of academic and personal resources on campus and in study skills efficiency.

When Loyola University, New Orleans, made a focused effort to improve the quality of freshman student life and learning, higher retention was the outcome. Voigt (2000) writes that the class of 1996 being smaller than projected was the momentum behind retaining every student to minimize the budget shortfall. Realizing that recruitment and retention were inseparable, improvements in retention were deemed necessary in order to assure enrollment success in the future. The challenge of student retention at Loyola rests in facing factors such as isolation, unrealistic expectations, discouragements, reduced motivation, engagement in the college experience, interaction with faculty, staff and other students and institutional effectiveness. The questions posed were how to assure the quality of education, how to move from best intention to best
practice, and how to sustain the energy and commitment (Voigt, 2000). It became clear at Loyola that student retention was not one person or department’s problem to fix, but the whole community of the university. Loyola set the direction with student success as the key indicator and identified what encompassed a campus-wide and on-going commitment demonstrated not just by the rhetoric of the institution, but by its process, procedures and programs. (Voigt, 2000). Loyola adopted the philosophy that retention serves as a measure of student learning, of how well integrated students are in campus life, and of how effectively the campus delivers what the students expect and need. As a result, Loyola’s rates have improved while national graduation rates have declined or remained flat. These rates suggest that improvements may be attributed more too internal forces that external ones. The process has resulted in the campus community coming together and assuming responsibility and ownership for implementing action strategies identified in the task force plan, as well as for pursuing additional improvements as only empowered individuals and groups might feel free to do (Voigt).

**Commuter Campuses**

When Tinto focused on two-year and commuting campuses, the concept of external forces influencing students was highlighted. The college campus is no longer the focal point of the student’s environment, particularly in urban settings. Tinto turned attention to the institutional commitment to students, noting three factors needed for effective retention programs. First, effective retention programs are committed to the students they serve. They put student welfare ahead of other institutional goals. Second, effective retention programs are first and foremost committed to the education of all, not just some, students. Third, effective retention programs are committed to the
development of supportive social and educational communities in which all students are integrated as competent members (Mohammadi, 1996).

Napoli and Wortman (1998) conducted a study based on Tinto’s multivariate model of student retention specific to a two-year community-college environment. This model of student characteristics and interactions with both the social and academic environments are primary in determining the educational goals and institutional commitments of students (Napoli & Wortman, 1998). Napoli and Wortman and others reflect that student commitment is directly influenced by factors including, but not limited to, external commitments, academic and social integration. Napoli and Wortman (1998) define integration as the extent to which an individual identifies with or shares in and incorporates the normative attitudes and values of his or her instructors and classmates and becomes a member of the college community. Napoli and Wortman found clear connections between prior academic achievement and goal commitment. Napoli and Wortman (1998) found the degree of organization, retention and motivation and self-esteem were strong predictors of goal commitment. Further, they found social support and academic integration to be positively significant.

Students involved in the learning community at Seattle Community College reported a greater involvement in a range of academic and social activities and greater perceived developmental gains over the course of the year than did students in the comparison classes of the regular curriculum (Tinto, 1997). According to Tinto, students in the learning community classes reported being substantially more involved in course activities and activities involving other students than did students in comparison classes. Students also reported significantly more positive views of the college, its students and
faculty, its classes and climate, and of their own involvement in the college. These students persisted at a significantly higher rate than did similar students in regular classes (Tinto). In the results and conclusions, Tinto indicated that there were five variables that were significant predictors of retention in this setting: participation in the learning community, college GPA, hours spent studying weekly, and perceptions of faculty and factor score of involvement with other students. Tinto concluded that peer groups encouraged participation and enabled students to develop social networks that helped students make the transition to college and integrate into a community of peers. Many students reported participation in learning communities as an important part of being able to manage the many struggles they faced in getting to and participating in class. The communities contributed not only to a high level of student participation in learning, but also to the development of supportive peer groups. The shared learning served to bridge the academic and social divide. Finally, Tinto reported that participation in a collaborative or shared-learning group enabled students to develop a network of support. Students were influenced by participating in a setting in which sources of learning came from a variety of perspectives beyond that of one faculty member. Classroom experience shapes students retention. These relationships are likely to be especially important for those students in those collegiate settings where involvement is not easy to achieve. This method provides a mechanism through which both academic and social involvement arises and student effort is engaged (Tinto, 1997).

One of the few studies focusing on retention and attrition in a two-year institution was done by Mohammadi (1996). His longitudinal study was used to improve retention rates and establish a reliable set of indicators at a community college. It is clear that the
demographic and socio-economic factors of a community-college student are different from those usually attending a residential campus. Mohammadi related that community-college students are typically older, attend part-time, have lower degree-goals and lower high school grades. They typically have more-modest financial resources, work more hours and have additional family responsibilities. Additionally, they usually have relatively little interaction with other students outside of class and are not involved in campus activities. Mohammadi concluded that students’ goals for attending college are a strong predictor of retention (Mohammadi, 1996). This longitudinal study covered four academic years at a community college. Students who showed active course registration a year after initial registration were assumed to be retained. This research involved clusters of predictor variables. The first cluster was demographic in nature, gender, age and ethnicity. The second cluster involved academic achievement variables; overall and first-semester GPA and hours taken per semester. The final cluster of variables included enrollment status, curriculum of study and academic level. The dependent variable was dichotomous of persisters and leavers (Mohammadi, 1996). Their research questions were “What was the retention pattern of the first–time students enrolled in the fall of 1988 after one, two, three and four years by ethnic background, by gender?” (Mohammadi, 1996); “What was the nature of data on demographic and academia variables for students who first enrolled in the fall of 1988 and did not return in the fall of 1989? What were the significant variables that contributed in determining the retention and/or attrition rates?” This research used logistic regression to identify the significant variables in determining retention rates. In order of importance, those variables were goals, hours taken per semester, hours completed, semester GPA and overall GPA
The study did not find age, race or gender as significant predictors. The study found the highest rate of attrition occurred in the unclassified category. The author believes that finding implies a major proportion of those who left the college had no intention of completing a certificate or degree. The discussion continued to illustrate the point that community and other non-residential campuses have open access policies which do influence the rates of retention.

Mohammadi (1996) concludes that community-colleges should take more of the known variable into consideration when attempting to create a model of attrition rates. These colleges should design and offer new programs to unclassified students. The findings also indicate that to establish a reasonable set of indicators of student retention, each college should develop an internal standard against which the institution can judge its own performance. How well are we doing, given the students we admit?

Clarke and Clarke (1996) began their research with the premise that students who lack involvement in learning as well as academic and social integration into the campus community are more likely than other students to experience difficulties. This research used students in three populations: a research university, a comprehensive college and a two-year college. This particular study focused in educational aspirations, alienation and approaches to learning and academic outcomes. As expected, differences emerged in the populations. Aspiration between two-year and four-year institutions was an obvious and expected difference. Retention did not seem related to institution type. The researchers found alienation differences as well. Interestingly, students attending the research and comprehensive college reported experiencing more meaninglessness than those in the two-year campus environment. The authors concluded that student networks may
provide a positive connection for retention. They state that their findings suggest the importance of examining the relationship between institutional characteristics and the diverse ways in which students experience and adapt to specific campus environments.

Finally, the college classroom lies at the center of the educational activity structure for institutions of higher education. For commuters, the classroom may be the only place where students and faculty meet. According to Tinto (1997), little has been done to explore how the experience of the classroom shapes student retention. It has been well documented by Tinto and others that the greater student involvement or integration in the life of the college, the greater the likelihood that they will persist. Tinto looked at Seattle Central Community College to see if altering student classroom experiences through the use of learning communities can enhance student learning and retention (Tinto, 1997 p2.): “What we do know is that students’ participation in the college classrooms is relatively passive, that learning is a spectator sport in which faculty talk dominates.” Seattle sought to re-define learning by restructuring the classroom and by altering faculty practice, linking courses to one another so that students encountered learning as a shared experience.

Noel-Levitz

A leader in research on retention is the agency of Noel-Levitz. Noel-Levitz shared a vision: to lead the charge for total enrollment effectiveness in higher education for two-year and four-year colleges and universities, public and private, as well as graduate and professional schools. Noel-Levitz has collaborated in retention research and planning with 1700 two-year, four-year and graduate and professional schools during its existence (Noel Levitz, 2006).
Noel Levitz notes that satisfied students are more likely to be successful students and that institutions with more satisfied students have higher graduation rates (Noel Levitz 2005). In keeping with this belief, Noel Levitz Inc. has developed student satisfaction assessment tools that measure not only overall satisfaction with the institution, but also the level of importance a student aligns with different areas related to retention (2005). “Importance ratings provide institutions with valuable data on the areas that matter most to students” (2005). Based on the principle of consumer theory, the instrument approached the student as a consumer with expectations about what they want from an institution. Assessment tools measure Scales (the areas on campus that matter most to students) and enrollment factors (those factors that influence a student’s decision to attend a specific institution or location) 2005.

**Ohio University**

The economic future of the country, state and community is rooted in the strength of the workforce. State of Ohio understands a strong and vital workforce is a well-educated one. Ohio is a state that struggles both with the amount of funding it uses to support state colleges and universities and with the percentage of its population who are college completers. In 1997, the State of Ohio ranked 40th in terms of state and local support per student in higher education. In addition, fees and tuition in Ohio’s state supported schools are relatively high (Ohio Board of Regents, 2000). The importance of the issue captured the governor’s attention, as reflected in a letter he wrote to the Chancellor of the Ohio Board of Regents, the state governing body for higher education, in which he says, “I am deeply interested in the success of Ohio’s college and universities students. I am equally troubled by reports showing that graduation rates for some
students in our universities are significantly below those of similar institutions” (Correspondence, 1999).

Recruiting students is only the first step; retaining them is the real challenge. Ohio’s statewide graduation rate (for first-time students attending full-time) was 50% within six years (Ohio Board of Regents). For Ohio University, the topic of retention has been in the forefront for some time. The focus on retention began in 1978 when the Office of Institutional Research did a study on the Factors Associated with Retention at Ohio University (Ohio University, 1978). That was followed with an Involvement Study in 1979. Since that time Ohio University made it a practice to monitor retention rates. Using the factors identified as being associated with retention at Ohio University, the institution would periodically introduce programs aimed at improving and increasing retention on the Athens campus. In 1997, the Office of Institutional Research did a study of first-year involvement in Ohio University. The introduction of this report serves to echo Astin’s finding: students who are more involved in activities related to their formal education will grow more as individuals, will be more satisfied with their education and will tend to persist to graduation (Ohio University, 1997). As a follow-up, the university intensified an identification process of at-risk students and of an intervention program. The university found they had positive effects from their enhanced involvement intervention process. A significant number of students identified as potential leavers involved in the program actually returned the next fall (Office of Institutional Research 1997). The Athens Campus of Ohio University did a study in 1997 on factors associated with first-year student attrition and retention at Ohio University. Acknowledging the selective admission status of the Athens Campus, the student body is comprised of more
academically-able first-year students. The report notes that under open admissions, almost 30% of the first-year student class would complete their first year with less than a 2.00 GPA. Under selective admissions, only 11% have GPAs of less than 2.0, and 89% have GPAs above 2.0. The report concluded that the entire campus community needed to be committed to retaining Ohio University students.

Ohio University again addressed the issue of retention in January of 1998 with a report titled “A look at retention at Ohio University” (Williford & Rudy, 1998). While this report focused on the residential campus, it addressed some issues and factors that influence any first-year student. The university developed a student survey that collected information on freshmen majors, first year GPA, gender and level of campus involvement as it related to retention. One of the factors impacting student retention was that students who came to college with a higher class rank in high school had a better chance to return for a second year of college. From this survey, a program was developed to identify students at risk of dropping out.

More recently Ohio University conducted a comprehensive analysis of the reasons first-year student withdrawal. This study made public in April of 2005, addressed 2003-04 to 2004-05 first-year student attrition. Three of the most identified reason for leaving campus were personal adjustment reasons, cost and financial aid and a negative campus experience (Office of Institutional Research, 2005).

**The Regional Campuses**

In 1999 a study was completed on the regional campuses of Ohio University. The study showed a ten-year history of retention at each of the regional campuses and a benchmark for the future. The report noted that retention rates varied both from campus to campus and year to year. Not unlike the conclusion of the Athens Campus report, the
regional campus report closed with the charge that each regional campus needed to be committed to retaining its students. Faculty, administrators and staff need to realize the importance of an effective retention program as a critical part of stable enrollments. In 2007 the Office of Institutional Research noted that the combined retention rate on the regional campuses in 2006 was 57% (Office of Institutional Research, 2007). The retention rates by campus in 2006 were; Eastern, 59 percent; Chillicothe, 62 percent; Lancaster, 55 percent; Southern, 50 percent; and Zanesville, 60 percent (2007). The Pickerington Center statistics are included in the Lancaster Campus numbers and the Proctorville statistics are included in the Southern Campus numbers.

The topic of student retention in higher education is vitally important. There have been many studies that have focused on the retention of the first-year college student. Of particular interest in this case is the first-year student at a non-residential campus. This population opens the discussion to include not only the traditional age student, but also the non-traditional, adult first-time college student. Unfortunately, some generalizations will have to be extended due to the limited amount of focused studies on that adult population. The focus of this paper is on retaining first-year college students on a commuter campus. It will argue that while challenges exist beyond those faced on a residential campus, programs and environments can be established to increase first-year retention to the second-year.

**Summary and Conclusions**

There are distinct differences in the environment and strategies that can be used to effect and to increase retention rates in different campus environments, some consistency in the themes arise in the research. Some of the factors that seem to impact retention
regardless of the campus situation are academic preparation of entering students, involvement in total life of the campus, faculty/student and student/student interaction, institutional commitment, goal commitment and motivation. It is thought that relationships with faculty, staff or administration will positively impact a student’s decision to continue; treating students with respect will positively impact a student’s decision to continue; delivering good service and meeting the needs of the student will positively impact a student’s decision to continue; providing accurate advising services will positively impact a student’s decision to continue; and attending the college survival skills class will positively impact a student’s decision to continue. This study will set out to confirm these factors as they pertain to a non-residential, open-enrollment regional campus.
CHAPTER THREE: METHODOLOGY

Retaining students in higher education is central to the continued financial health of an institute of higher learning. The factors influencing students to persist and complete their education are varied by both individual, the environment of the institution and the student’s perception of their experience. Much research has been done on student retention at traditional, selective, residential campuses. Limited research has been done from a commuter environment, and the majority of that research has been from a community college perspective. A commuter campus of a four-year institution presents a mix of factors from both residential and community colleges. The educational goals of these students include Associate Degrees, Baccalaureate Degrees and Master Degrees.

The purpose of this study was to determine the factors that relate to student retention from one Fall quarter to the next Fall quarter at the regional campuses and centers of Ohio University. The data used in this study were derived from records obtained during a survey of traditional students who attended a regional campus or center of Ohio University fall quarter 2005. The regional campuses and centers of Ohio University were treated as a system and not individual sites for this study. The campuses were treated as a system rather than individually for a number of reasons. The first is that many students attending a regional campus, attend multiple campuses and centers in any given quarter. Students will go where the classes are that they need. Secondly, not all campuses participated at the same level. Treating the campuses as a system allows for the variance between campus participation.

The researcher divided the population of traditional students by those who persisted to be registered for classes the following Fall quarter, September 2006, and those who
were not. The focus was on the correlation between student’s responses to the importance of, and satisfaction with the twelve scales of student satisfaction instrument, and student retention.

This chapter contains the research design of this study. It begins with the identification of the population in the study, followed by the instrumentation and a description of the scales used in the instrument. Reliability and validity issues and research questions follow. A discussion of the data collection procedures explains how the surveys were completed, collected and complied. The data analysis procedure discusses the type of analysis used for each hypothesis, followed by the data analysis which discusses the step-by-step procedure used with the data. It includes defining the dependent and independent variables and an analysis of the hypotheses.

**Identification of the Population**

The population of this study was comprised of those traditional aged students (18-23 years old) who were enrolled at one of the five regional campuses or two centers of Ohio University the Fall of 2005, who participated in the survey and provided the survey with the optional identification number. The student satisfaction surveys were administered at Ohio University towards the end of the Fall quarter 2005 to enrolled traditional students attending day, evening and weekend classes. Student Service personnel identified classes to administer the instrument to the greatest number of students. Student Service personnel contacted instructors in each of these classes to ask for a brief time period to come into class and administer the instrument. Students were asked to self identify if they were approached to take the survey more than once. This study only used those results from traditional aged students who provided identification
numbers (social security numbers), and thus duplications could be identified. If a student filled out more than one survey at a single campus, one of the surveys was disregarded. If a student filled out surveys at multiple locations, the student’s records were reviewed to determine where they attended most and that survey was used. The data was used to assess student satisfaction on the regional campuses and centers of Ohio University as a unit and not individual sites.

**Instrumentation**

The Noel-Levitz Student Satisfaction Inventory (SSI) for traditional age students was used for this study. Based on the principles of consumer theory, the instrument approaches the student as a consumer with expectations about what they want from the institution (Levitz Noel, 2006). The instrument was designed so the student identifies how important the item is to them, and how satisfied they are. Both responses are on a 7 point Likert scale. There are multiple versions of both instruments available; Ohio University used the 4-Year College and University Version (Noel Levitz 1994). This decision was made at the University level. The 4-Year instrument best meets the needs of the institution and the regional campuses and centers, it does however include some questions that are not applicable to the non-residential nature of the campuses. The scales used in the instrument are as follows:
The Scales:
Academic Advising Effectiveness: This scale measures the effectiveness of academic advisors and advising program. Some of the factors assessed include approachability, personal concern for student success and knowledge (Questions 6,14,19,33 and 55 on the SSI).

Campus Climate: This scale measures how well the institution promotes campus pride, how well it communicates with students and the degree to which it promotes feelings of belonging a part of the campus (Questions 1,2,3,7,10,29,37,41,45,51,57,59,60,62,66,67 and 71 on the SSI).

Campus Life: This scale measures factors such as residence life, athletics and orientation and the material in the student handbook (Questions 9,23,24,30,31,38,40,42,46,52,56,63,64,67 and 73 on the SSI).

Campus support services: This scale measures student support services such as the library, computer lab, career services and tutoring (Questions 13,18,26,32,44,49 and 54 on the SSI).

Concern for the Individual: This scale measures the institution’s commitment to treating each student as an individual (Questions 3,14,22,25,30 and 59 on the SSI).

Instructional Effectiveness: This scale measures the effectiveness of the full and part time faculty both in and out of the classroom. It also includes the curriculum and students academic experience (Questions 3,8,16,25,39,41,47,53,58,61,65,68,69 and 70 on the SSI).

Recruitment and Financial Aid Effectiveness: This scale measures the effectiveness of the enrollment and financial aid process (Questions 4, 5,12,17,43 and 48 on the SSI).
Registration Effectiveness: This scale measures the effectiveness of registration and billing processes (Questions 11, 20, 27, 34 and 50 on the SSI).

Responsiveness to Diverse Populations: This scale measures the institutions’ attention to under-represented students and others with different needs or circumstances (Questions 84, 85, 86, 87, 88 and 89 on the SSI).

Safety and Security: This scale measures the priority given to safety and security on the campus (Questions 7, 21, 28 and 36 on the SSI).

Service Excellence: This scale measures the attitude of staff toward students (Questions 2, 13, 15, 22, 27, 57, 60 and 71 on the SSI).

Student Centeredness: This scale measures the institution’s success at making students feel welcome and valued as an important part of the campus (Questions 1, 2, 10, 29, 45 and 59 on the SSI)”(Noel-Levitz 2006).

The Noel-Levitz instrument evaluates two areas. Enrollment factors looks at those factors that influence a student’s decision to enroll in an institution; cost, reputation, and size, and may or may not affect a student’s decision to stay. The second area is described as scales, those areas such as ‘Academic Advising Effectiveness’ and ‘Campus Climate’ that impact a student’s decision to stay at an institution or to leave. These are items on the instrument that have been clustered either conceptually or statistically. Participants rate these items in both level of importance and level of satisfaction. Noel-Levitz identifies the performance gap by subtracting the satisfaction score from the importance score. A larger positive gap score indicates the institution is not meeting the student’s expectation. If an item is scored as not important, but is scored as satisfied, the gap score would be negative. If the item is important and the student is not satisfied, then it would
result in a larger positive gap score. One might expect where there are large positive gaps, a student might be more likely to leave the institution and where there is little or no gap, and a student is more likely to be retained. The instrument measures environmental factors; those items and factors that determined a student’s decision to enroll in an institution, scales that group items into areas that assess the institution’s commitment to students, and demographics.

**Reliability and Validity Issues**

The Student Satisfaction Inventory shows exceptionally high internal reliability. Cronbach’s coefficient alpha is .97 for the set of importance scores and .98 for the satisfaction scores. The score reliability over time in a three-week, test-retest reliability coefficient is .85 for importance and .84 for satisfaction (Levitz Noel, 2006).

“Convergent validity was assessed by correlating satisfaction scores from the SSI with the satisfaction scores from the College Student Satisfaction Questionnaire (CSSQ), another statically reliable satisfaction instrument. The Pearson correlation between the two \( r = .71; p < .00001 \) is high enough to indicate that the SSI’s satisfaction scores measure the same satisfaction construct as the CSSQ’s scores, and yet the correlation is low enough to indicate that there are distinct differences between the two instruments” (2006).

**Research Question**

The overall research question was:

Is there a relationship between student reports of their perceived importance and satisfaction with retention factors, their perceived importance and satisfaction with enrollment factors, and their demographic characteristics, with their actual retention at
the regional campuses and centers of Ohio University from one Fall quarter to the
following Fall quarter.

**Research Question One**

Is there a relationship between student reports of the importance of and their
satisfaction with retention factors reported in the *Noel Levitz: Student Satisfaction Survey
4-year College and University Version* and student retention at a regional campus?

The secondary research questions are:

1. Is there a relationship between the reported importance given academic
   advising, the satisfaction derived, and student retention?

2. Is there a relationship between the reported importance given campus climate,
   the satisfaction derived, and student retention?

3. Is there a relationship between the reported importance given campus life, the
   satisfaction derived, and student retention?

4. Is there a relationship between the reported importance given campus support
   services, the satisfaction derived, and student retention?

5. Is there a relationship between the reported importance given concern for the
   individual, the satisfaction derived, and student retention?

6. Is there a relationship between the reported importance given to instructional
effectiveness, the satisfaction derived, and student retention?

7. Is there a relationship between the reported importance given recruitment and
   financial aid effectiveness, the satisfaction derived, and student retention?

8. Is there a relationship between the reported importance given registration
effectiveness, the satisfaction derived, and student retention?
9. Is there a relationship between the reported importance given responsiveness to diverse populations, and student retention?

10. Is there a relationship between the reported importance given safety and security, the satisfaction derived, and student retention?

11. Is there a relationship between the reported importance given service excellence, the satisfaction derived, and student retention?

12. Is there a relationship between the reported importance given student centeredness, the satisfaction derived, and student retention?

**Research Question Two**

Did student reports of the importance of selected enrollment factors have a relationship with their decision to enroll?

The secondary research questions are:

1. Is there a relationship between the reported importance given cost and their decision to enroll?

2. Is there a relationship between the reported importance given academic reputation and their decision to enroll?

3. Is there a relationship between the reported importance given financial aid and their decision to enroll?

4. Is there a relationship between the reported importance given the geographic setting and their decision to enroll?

5. Is there a relationship between the reported importance given the size of the institution and their decision to enroll?

6. Is there a relationship between the reported importance given campus appearance and their decision to enroll?
7. Is there a relationship between the reported importance given personalized attention prior to enrollment and their decision to enroll?

8. Is there a relationship between the reported importance given recommendations from family/friends and their decision to enroll?

9. Is there a relationship between the reported importance given the opportunity to play sports and their decision to enroll?

**Research Question Three**

Is there a relationship between student demographics and their retention?

The secondary research questions are:

1. Is there a relationship between gender and student retention?

2. Is there a relationship between age and student retention?

3. Is there a relationship between ethnicity and student retention?

4. Is there a relationship between enrollment status and student retention?

5. Is there a relationship between class load and student retention?

6. Is there a relationship between class level and student retention?

7. Is there a relationship between GPA and student retention?

8. Is there a relationship between educational goals and student retention?

9. Is there a relationship between employment and student retention?

**Research Question Four**

Is there a relationship between initial college experience,
satisfaction and decision to attend and student retention?

The secondary research questions are:

1. Is there a relationship between a student’s evaluation of their initial expectation of their college experience and student retention?

2. Is there a relationship between student satisfaction with their experiences and student retention?

3. Is there a relationship between student satisfaction with college choice and student retention?

**Hypotheses**

The following null hypothesis was tested at the .05 alpha level. The number in the sample being unknown, the .05 level allows for the unknown sample size prior to results.

$Ho_1$ There is no significant relationship between student reports of the importance of and their satisfaction with retention factors on the *Noel Levitz: Student Satisfaction Survey 4-year College and University Version* and their retention at a regional campus.

The correlating sub null hypotheses were:

$Ho_{1a}$. There is no significant relationship between the reported importance given academic advising, the satisfaction derived, and student retention.

$Ho_{1b}$. There is no significant relationship between the reported importance given campus climate, the satisfaction derived, and student retention.

$Ho_{1c}$. There is no significant relationship between the reported importance given campus life, the satisfaction derived, and student retention.
Ho1d. There is no significant relationship between the reported importance given campus support services, the satisfaction derived, and student retention.

Ho1e. There is no significant relationship between the reported importance given concern for the individual, the satisfaction derived, and student retention.

Ho1f. There is no significant relationship between the reported importance given to instructional effectiveness, the satisfaction derived, and student retention.

Ho1g. There is no significant relationship between the reported importance given to recruitment and financial aid effectiveness, the satisfaction derived, and student retention.

Ho1h. There is no significant relationship between the reported importance given registration effectiveness, the satisfaction derived, and student retention.

Ho1i. There is no significant relationship between the reported importance given responsiveness to diverse populations, and student retention.

Ho1j. There is no significant relationship between the reported importance given safety and security, the satisfaction derived, and student retention.

Ho1k. There is no significant relationship between the reported importance given service excellence, the satisfaction derived, and student retention.

Ho1l. There is no significant relationship between the reported importance given student centeredness, the satisfaction derived, and student retention.
The second null hypothesis was:

$H_0^2$ There is no significant relationship between student reports of the importance of selected enrollment factors and their decision to enroll?

The correlating sub null hypotheses were:

$H_{0a}^2$. There is no significant relationship between the reported importance given cost and their decision to enroll?

$H_{0b}^2$. There is no significant relationship between the reported importance given academic reputation and their decision to enroll?

$H_{0c}^2$. There is no significant relationship between the reported importance given financial aid and their decision to enroll?

$H_{0d}^2$. There is no significant relationship between the reported importance given the geographic setting and their decision to enroll?

$H_{0e}^2$. There is no significant relationship between the reported importance given the size of the institution and their decision to enroll?

$H_{0f}^2$. There is no significant relationship between the reported importance given campus appearance and their decision to enroll?

$H_{0g}^2$. There is no significant relationship between the reported importance given personalized attention prior to enrollment and their decision to enroll?

$H_{0h}^2$. There is no significant relationship between the reported importance given recommendations from family/friends and their decision to enroll?

$H_{0i}^2$. There is no significant relationship between the reported importance given the opportunity to play sports and their decision to enroll?
The third null hypothesis was:

$H_{03}$. There is no significant relationship between student demographics and student retention.

The correlating sub null hypotheses were:

$H_{03a}$. There is no significant relationship between gender and student retention.

$H_{03b}$. There is no significant relationship between age and student retention.

$H_{03c}$. There is no significant relationship between ethnicity and student retention.

$H_{03d}$. There is no significant relationship between enrollment status and student retention.

$H_{03e}$. There is no significant relationship between class load and student retention.

$H_{03f}$. There is no significant relationship between class level and student retention.

$H_{03g}$. There is no significant relationship between GPA and student retention.

$H_{03h}$. There is no significant relationship between educational goal and student retention.

$H_{03i}$. There is no significant relationship between employment and student retention.

The final null hypothesis was:
Ho4 There is no significant relationship between student expectations of college, their experience, their decision to attend and student retention.

The correlating sub null hypotheses were:

Ho4a There is no significant relationship between student expectations of college, their experiences and student retention.

Ho4b There is no significant relationship between student satisfaction with their experiences and student retention.

Ho4c There is no significant relationship between student satisfaction with college choice and student retention.

Data Collection Procedures
In Fall of 2005, the Senior Associate Vice President for University Outreach and Regional Campuses notified the five regional campuses and two centers of Ohio University that they would be administering student satisfaction, adult student priorities and institutional priorities assessments by the end of the quarter. Campus administrators were instructed to attain as close to 100% participation as possible. While each campus approached the task in its own manner, most identified basic classes with high enrollment, worked with the faculty to limit intrusion into class time, and had staff administer the instrument. The goal was to have each student participate, and classes were chosen with that goal in mind. Each campus, understanding the programs and enrollments they have, made their choices in how to achieve the goal. Students were instructed to complete the survey only once per campus or center. If they attend in more than one location, they were to complete the instrument according to the location where it was being administered. At the assigned day and time, a staff person came to the
classroom, gave instructions, and administered the instrument. In most cases an incentive was given to the students completing the assessment as thank you for their participation.

For the purpose of this study, if a student completed an assessment with their identification numbers at more than one location, only one was utilized. Location was determined by where the student took the majority of their classes.

**Data Analysis Procedures**

The Statistical Package for Social Sciences (SPSS) was used to compute the data, and Multiple Regression was the primary method of analysis. Regressions study the relationship between a single dependent variable and one or more independent variables (Allison, 1999). Three multiple regressions will be run on the primary hypothesis. First, a regression was run on the hypothesis dealing with the importance scales. Second, a regression was run on the satisfaction scales and the third regressions were run on the performance gaps. A regression was also run on the primary hypothesis dealing with the enrollment factors. Pearson Correlations were run for the Importance Scales, the Satisfaction Scales and the Gap Scores. A correlation reflects the degree that continuous variables are related (Allison, 1999).

The primary hypothesis addressing demographics was analyzed using a Chi Squares run on all the sub hypotheses to determine which were significant. The categorical nature of the response on the survey instrument encouraged the use of this tool. Descriptive statistics and frequencies will also be presented. The final hypothesis addressing the expectation of the college experience and satisfaction with the student’s decision to attend were evaluated with a ‘T’ test. A ‘T’ test assesses whether the means of two groups are statistically different from each other (Allison, 1999).
The instrument uses a Likert-type scale to gauge importance and satisfaction. There are two evaluations, the first measuring ‘the importance to me’ and the second measuring ‘my level of satisfaction.’ The scales run from ‘1’ (not important at all) to ‘7’ (very important) and ‘1’ (not satisfied at all) to ‘7’ (very satisfied). In both cases ‘4’ indicates a neutral response, and there is an option for ‘does not apply.’

Student satisfaction is assessed in two ways: the importance of, and the satisfaction with a particular factor. Between the two lies a performance gap. If the factor is important to students and they are satisfied, then the gap measurement will be small. If students report a factor as important but the student is not satisfied or as not important and the student is satisfied, then the gap will be larger in either a positive or negative direction. Only the positive directed gap scores are significant. If the gap score is negative, it means that the scale is not important to the student, but they are satisfied with it.

**Data Analysis Process**

Data from the surveys was downloaded into the *Statistical Package for the Social Sciences for Windows* (SPSS 12.0). Each identification number was looked up in the Student Information System to verify the student was still attending fall quarter 2006 (2007-1). If the student was still attending they were coded 1 = retained, and if they are no longer attending they were coded 0 = no longer attending. (For purposes of this study, if a student had completed their program of study between the fall 2005 when the instrument was administered and fall 2006 when retention was recorded, they were coded as ‘1’, retained.)

The instrument was reviewed to insure that all questions were stated in a positive manner so no manipulation had to be done to account for directional questions. Each campus and
center will be coded 1=Chillicothe, 2=Eastern, 3=Lancaster, 4=Pickerington, 5=Proctorville, 6=Southern and 7=Zanesville. A baseline frequency table was run to
determine the participation by campus.

**Operationalizing the variables used in the analysis**
The dependent variable was the academic retention of the group of students who
attended a regional campus of Ohio University in the fall of 2005, participated in student
satisfaction surveys and provided an identification number on the surveys. This variable
was operationalized and coded as retention, and the campus location of the respondent
was identified as well.

The independent variables were those factors illustrated in the environmental
factors, the scales and the demographics that the student satisfaction instrument measured
to predict student retention. The factors were the independent variables because they
could have an influence on student retention.

The independent variables identified in the scales are two-fold in the importance of
and satisfaction with: academic advising, campus climate, campus life, campus support
services, concern for the individual, instructional effectiveness, recruitment and financial
aid, registration effectiveness, responsiveness to diverse populations, safety and security,
service excellence and student centeredness. The independent variables used in the
enrollment factors are: cost, academic reputation, financial aid, geographic setting, and
size of the institution, campus appearance, and personal attention prior to enrollment,
recommendations from family/friends, and opportunity to play sports. Finally, the
independent variables used in the demographic section were: gender, age, ethnicity,
enrollment, class level, GPA, educational goals and present employment.
The items in the Noel-Levitz survey needed to be “combined” to represent these variables. The items included in a scale were added together and divided by the number of items and then named a new variable for both the importance and satisfaction items. For example, the Academic Advising Effectiveness scale related to questions 6, 14, 19, 33 and 55. The ‘transform’ and ‘compute’ functions were used to add the results and divide by five (the number of questions involved). This process was done for both the Importance scale and the Satisfaction scale. Each variable was re-named as ACAIMP and ACASAT respectively and labeled as Academic Advising Imp and Academic Advising Sat. This process was repeated for each of the twelve scales.

Finally, the ‘gap’ scores were determined by using the ‘transform’ and ‘compute’ functions again. In the first case the variable for Academic Advising Satisfaction was subtracted from the Academic Advising Importance variable and the result was named ‘Advising gap’. This process was repeated for each scale.

Analyzing the hypotheses

First research question and related null hypotheses. The first primary research question was: Is there a relationship between student reports of the importance of and their satisfaction with retention factors on the Noel Levitz: Student Satisfaction Survey 4-year College and University Version and their retention at a regional campus?

The coordinating null hypothesis was:

\[ H_0 \] There is no significant relationship between student reports of the importance of and their satisfaction with retention factors on the Noel Levitz: Student Satisfaction Survey 4-year College and University Version and their retention at a regional campus.
A frequency table was run on the Importance and Satisfaction scales to determine results across the scales. A regression and Pearson Correlation were run to measure any association among the importance scores of the multiple independent variables (academic advising, campus climate, campus life, campus support services, concern for the individual, instructional effectiveness, recruitment and financial aid, registration effectiveness, responsiveness to diverse populations, safety and security, service excellence and student centeredness) and the dependent variable of persisting and a summed importance measurement of the scales as the multiple independent variables. This process was repeated using the satisfaction scores for the multiple independent variables. Finally it was repeated using the gap measurements. The regressions also enabled the researcher to answer the null sub hypotheses of Ho1 about each of the independent variables. The correlating sub null hypotheses were:

Ho1a. There is no significant relationship between the reported importance given academic advising, the satisfaction derived, and student retention.

Ho1b. There is no significant relationship between the reported importance given campus climate, the satisfaction derived, and student retention.

Ho1c. There is no significant relationship between the reported importance given campus life, the satisfaction derived, and student retention.

Ho1d. There is no significant relationship between the reported importance given campus support services, the satisfaction derived, and student retention.
Ho1e. There is no significant relationship between the reported importance given concern for the individual, the satisfaction derived, and student retention.

Ho1f. There is no significant relationship between the reported importance given to instructional effectiveness, the satisfaction derived, and student retention.

Ho1g. There is no significant relationship between the reported importance given to recruitment and financial aid effectiveness, the satisfaction derived, and student retention.

Ho1h. There is no significant relationship between the reported importance given registration effectiveness, the satisfaction derived, and student retention.

Ho1i. There is no significant relationship between the reported importance given responsiveness to diverse populations, and student retention.

Ho1j. There is no significant relationship between the reported importance given safety and security, the satisfaction derived, and student retention.

Ho1k. There is no significant relationship between the reported importance given service excellence, the satisfaction derived, and student retention.

Ho1l. There is no significant relationship between the reported importance given student centeredness, the satisfaction derived, and student retention.

Second research question and related null hypotheses. The second research question was: Did student reports of the importance of selected enrollment factors have a relationship with student retention? The coordinating null hypothesis was:
Ho2 There is no significant relationship between student reports of the importance of selected enrollment factors and their decision to enroll?

A regression was performed on the data to assess the association between the dependent variable of the decision to enroll and the multiple independent variables of cost, academic reputation, financial aid, geographic setting, and size of the institution, campus appearance, and personal attention prior to enrollment, recommendations from family/friends, and opportunity to play sports. In addition to examining any overall impact on enrollment, the regression also enabled the researcher to answer the null sub hypotheses of Ho2 about each of the independent variables. The correlating sub null hypotheses were:

Ho2a. There is no significant relationship between the reported importance given cost and their decision to enroll?

Ho2b. There is no significant relationship between the reported importance given academic reputation and their decision to enroll?

Ho2c. There is no significant relationship between the reported importance given financial aid and their decision to enroll.

Ho2d. There is no significant relationship between the reported importance given the geographic setting and their decision to enroll.

Ho2e. There is no significant relationship between the reported importance given the size of the institution and their decision to enroll.

Ho2f. There is no significant relationship between the reported importance given campus appearance and their decision to enroll.
Ho2g. There is no significant relationship between the reported importance given personalized attention prior to enrollment and their decision to enroll.

Ho2h. There is no significant relationship between the reported importance given recommendations from family/friends and their decision to enroll.

Ho2i. There is no significant relationship between the reported importance given the opportunity to play sports and their decision to enroll.

Third research question and related null hypotheses. The third research question was: Did student demographics have a relationship with student retention? The coordinating null hypothesis was:

Ho3. There is no significant relationship between student demographics and student retention.

A Chi Square was performed on the data to assess the association between the dependent variable of retention and the multiple independent variables of gender, age, ethnicity, enrollment status, class load, GPA, educational goal and employment.

The correlating sub null hypotheses were:

Ho3a. There is no significant relationship between gender and student retention.

Ho3b. There is no significant relationship between age and student retention.

Ho3c. There is no significant relationship between ethnicity and student retention.

Ho3d. There is no significant relationship between enrollment status and student retention.
Ho3e. There is no significant relationship between class load and student retention.

Ho3f. There is no significant relationship between class level and student retention.

Ho3g. There is no significant relationship between GPA and student retention.

Ho3h. There is no significant relationship between educational goal and student retention.

Ho3i. There is no significant relationship between employment and student retention.

Fourth research question and related null hypotheses.

The Fourth research question was: Is there a relationship between initial college experience, satisfaction and decision to attend and student retention? The coordinating null hypothesis was:

Ho4 There is no significant relationship between student expectations of college, their experience, their decision to attend and student retention.

A ‘T’ test was run to evaluate the difference in means between the two groups, those who persisted and those who did not and the independent variables of expectation, experience, and choice. The correlating sub null hypotheses were:

Ho4a There is no significant relationship between student expectations of college, their experiences and student retention.

Ho4b There is no significant relationship between student satisfaction with their experiences and student retention.
There is no significant relationship between student satisfaction with college choice and student retention.

**Summary**

Chapter three explained the procedures used in this study. The population was identified followed by an examination of the instrumentation used. Reliability and validity issues were addressed. Finally, this chapter detailed the data analysis procedure to be used for each research question. The next chapter, chapter four will present and analyze the data.
CHAPTER FOUR: ANALYSIS OF DATA AND FINDINGS

This chapter contains the analysis of data collected for this study. First, the background of the study is presented. Then the number of valid responses by campus and retention rate based on the responses is reviewed. Frequencies on each of the scales are discussed followed by the presentation and analysis of the data for each of the research questions.

Research Question One is analyzed in multiple sections. First the results of the comprehensive scales including Importance, Satisfaction and Gap are analyzed. Then each is looked at individually, first the Importance scales are analyzed. Next the Satisfaction scales are analyzed. Finally the Gap scales are analyzed. Each scale category is analyzed by running a multiple regression. Research Question Two is also analyzed by using a multiple regression. Research Question Three is analyzed using Chi-Square, and Research Question Four is analyzed using ‘t’s for each sub question. The chapter concludes with an overall summary.

Background

During the fall of 2005, a student satisfaction instrument was administered to the students attending the five regional campuses and two centers of Ohio University. The pencil and paper instrument was administered in selected classes primarily by student service staff.

Participation was encouraged but not required. Students were asked to complete only one survey per campus attended. The identification number used on the instrument was the student’s social security number. The data were reviewed to insure that there was no duplication of results in students responding multiple times.
Each number was looked up on the Student Information System (SIS) to determine if the student was registered for classes at Ohio University during Fall quarter the following year 2007-1. Students who were registered for class were coded as retained (1), and those no longer attending were coded as such (2). For purposes of this study, those students who completed their degree during that year were coded as retained.

The instrument measures the importance of, and satisfaction with, twelve different scales. Instruments were sent to the consulting firm that created the form for analysis. The data from the surveys were sent back to the university electronically, then downloaded into the Statistical Package for Social Sciences (SPSS). Five hundred and seventy five of the 816 responses were valid with identification numbers that could be linked to a student record.

**Response by Campus**

Table 1 provides data regarding the number of responses from each campus and center. The response from the Chillicothe campus was low, and could not be used for any analysis by campus. The directive from the Associate Vice President was as close to 100 percent participation as possible. The reason for the lack of participation on the Chillicothe campus is not known. The Southern campus* had a large number of invalid responses and several attempts were made to contact the campus and determine why there were so many invalid responses. No reason could be found. Regardless, the number of valid responses was in line with the other campuses, resulting in the data used in this study.
Table 1

*Valid Responses by Campus*

<table>
<thead>
<tr>
<th>Campus</th>
<th>Valid Responses</th>
<th>Total Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chillicothe</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Eastern</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Lancaster</td>
<td>170</td>
<td>170</td>
</tr>
<tr>
<td>Pickerington</td>
<td>77</td>
<td>77</td>
</tr>
<tr>
<td>Proctorville</td>
<td>34</td>
<td>34</td>
</tr>
<tr>
<td>Southern</td>
<td>132</td>
<td>360*</td>
</tr>
<tr>
<td>Zanesville</td>
<td>107</td>
<td>107</td>
</tr>
</tbody>
</table>

* The Southern Campus had a large number of responses with identification numbers that did not match any valid social security numbers in the Student Information System (SIS). Personal Identification Numbers (PIN) were also crosschecked to determine if that was the number the participant used. It was not. The researcher was not able to identify what the numbers used related to.

Table 2 shows the retention rate of respondents by campus. The retention rate among those who completed the instrument with valid identification numbers is consistent with rates between 72% and 74% at the Eastern, Lancaster, Southern and Zanesville campuses. The two centers fared less well, with rates of 61% and 65%. Chillicothe had such a small sample that it is not included in the results below. The Office of Institutional Research noted that the overall retention rate in 2006 by campus was; Eastern, 59 percent; Chillicothe, 62 percent; Lancaster, 55 percent, Southern, 50 percent
and Zanesville, 60 percent. These rates are lower than those who participated in the research.

Table 2

Retention by Campus Participants

<table>
<thead>
<tr>
<th>Campus</th>
<th>Attending</th>
<th>Not Attending</th>
<th>Total</th>
<th>% Retained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chillicothe</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>NA</td>
</tr>
<tr>
<td>Eastern</td>
<td>36</td>
<td>14</td>
<td>50</td>
<td>72%</td>
</tr>
<tr>
<td>Lancaster</td>
<td>122</td>
<td>48</td>
<td>170</td>
<td>72%</td>
</tr>
<tr>
<td>Pickerington</td>
<td>47</td>
<td>30</td>
<td>77</td>
<td>61%</td>
</tr>
<tr>
<td>Proctorville</td>
<td>22</td>
<td>12</td>
<td>34</td>
<td>65%</td>
</tr>
<tr>
<td>Southern</td>
<td>98</td>
<td>34</td>
<td>132</td>
<td>74%</td>
</tr>
<tr>
<td>Zanesville</td>
<td>78</td>
<td>29</td>
<td>107</td>
<td>73%</td>
</tr>
<tr>
<td>Total</td>
<td>406</td>
<td>169</td>
<td>575</td>
<td></td>
</tr>
</tbody>
</table>

Frequencies and Mean Scores of Items in the Importance and Satisfaction Scales

Frequencies were run for both the Importance Scales and Satisfaction Scales in order to determine the number of valid responses in each category. See Tables 3 and 4, respectively. If the number of valid responses is an indication of the importance of the scales then Student Centeredness, Academic Advising and Registration Effectiveness are most important to students; the mean scores validate that statement. The scale on the instrument identified 7 as very important, 6 as important and 5 as somewhat important. The mean scores for Registration Effectiveness and Academic Advising were the highest, at 6.2 (important). In fact, the mean score for every Importance scale but one fell in the
5.8-6.2 range. The exception was Campus Life with a mean of 5.5, which was still between somewhat important and important.

The Campus Life Scale and the Concern for the Individual Scale had significantly reduced response rates. Campus Life reported 266 (42%) for the Importance scale and 251 (40%) for Satisfaction scale. Since regional campuses are non-residential, the fact that students did not complete all the questions about Campus Life is not surprising. An example of questions in that scale is: *Living conditions in the residence halls are comfortable.* Some of the questions just do not apply to the experience of regional campus students.

Concern for the Individual was the other scale with a reduced number of responses. An example of a question on that scale was: *Faculty care about me as an individual.* One might look at the characteristics of students attending a non-residential campus for clues about the low response rate to this question. These students typically have a number of commitments outside their academic life. School is just one aspect of the responsibilities they manage. Even traditional students attending regional campuses have a number of the non-traditional characteristics of work and family commitments. The college campus is not the focal point of their environment (Mohammadi, 1996). Thus, it might not be as important to the student that the faculty cares about them, and this could explain their low response rate to this question.
### Table 3

**Importance and Satisfaction Scales Frequencies**

<table>
<thead>
<tr>
<th>Scales</th>
<th>Valid N</th>
<th>Mean Importance</th>
<th>Mean Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Advising</td>
<td>550</td>
<td>6.2</td>
<td>5.4</td>
</tr>
<tr>
<td>Campus Climate</td>
<td>488</td>
<td>6.0</td>
<td>5.4</td>
</tr>
<tr>
<td>Campus Life</td>
<td>266</td>
<td>5.5</td>
<td>5.0</td>
</tr>
<tr>
<td>Campus Support Service</td>
<td>499</td>
<td>6.0</td>
<td>5.4</td>
</tr>
<tr>
<td>Concern for Individual</td>
<td>315</td>
<td>5.9</td>
<td>5.3</td>
</tr>
<tr>
<td>Instructional Effectiveness</td>
<td>412</td>
<td>6.1</td>
<td>5.4</td>
</tr>
<tr>
<td>Recruitment/ Financial Aid</td>
<td>492</td>
<td>6.1</td>
<td>5.3</td>
</tr>
<tr>
<td>Registration Effectiveness</td>
<td>542</td>
<td>6.2</td>
<td>5.4</td>
</tr>
<tr>
<td>Safety and Security</td>
<td>458</td>
<td>6.1</td>
<td>5.3</td>
</tr>
<tr>
<td>Service Excellence</td>
<td>456</td>
<td>5.8</td>
<td>5.2</td>
</tr>
<tr>
<td>Student Centeredness</td>
<td>573</td>
<td>6.0</td>
<td>5.5</td>
</tr>
</tbody>
</table>

The Satisfaction scales frequencies show lower mean scores indicating that the satisfaction level of the respondents is not as high as the importance they attribute to these issues. Scores ranged from a 5.0 and to a high of 5.5 (5.0 indicates somewhat satisfied and 6.0 indicates satisfied). The highest level of satisfaction was on the Student Centeredness scale with 5.5 closely followed by Academic Advising, Campus Climate,
Support Services and Registration Effectiveness all with 5.4. The area with the least satisfaction was Campus Life with 5.0.

**Research Question One Findings**

The first research question was: Is there a relationship between student reports of the importance of and satisfaction of factors on the *Noel Levitz: Student Satisfaction Survey 4-year College and University Version* and their retention at a regional campus. The corresponding null hypothesis was:

H₀: There is no significant relationship between student reports of the importance of and their satisfaction with retention factors on the *Noel Levitz: Student Satisfaction Survey 4-year College and University Version* and their retention at a regional campus.

**Overall Results**

A multiple regression was run on the Importance scales, another on the Satisfaction scales, and a third on the Gap scales. The results of testing this overall hypothesis are presented, first, by reviewing the importance scales, followed by the satisfaction scales, and finally the gap scales. In this study, the gap score is the difference between the importance value on a particular scale and the satisfaction score. The larger the difference, the greater the disparity between what a student feels is important and their level of satisfaction. Large gap scores may indicate a decrease in the potential for retaining a student. The summary result for the regression test of the Importance Scale shows that there are too many factors that are too closely related for one to stand out as a strong predictor. The $R^2$ is a small value indicating the model does not fit well. See Table 4.
Table 4

*Importance Scale Regression Summary*

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.213</td>
<td>.045</td>
<td>.000</td>
<td>.458</td>
</tr>
</tbody>
</table>

The regression summary for the Importance Scale is a measure of how good a predictor of retention the satisfaction factors are. In this case too many factors are too closely related for one to stand out as a strong predictor. The $R^2$ is a small value indicating the model does not fit well. See Table 5.

Table 5

*Satisfaction Scale Regression Summary*

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.293</td>
<td>.086</td>
<td>.020</td>
<td>.450</td>
</tr>
</tbody>
</table>

The regression summary for the Importance and Satisfaction Scales combined are a measure of how good a predictor of retention these factors are. In this case too many factors are too closely related for one to stand out as a strong predictor. The $R^2$ is a small value indicating the model does not fit well. See Table 6.
Table 6

*Gap of Importance and Satisfaction Scale Regression Summary*

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.437</td>
<td>.191</td>
<td>.049</td>
<td>.444</td>
</tr>
</tbody>
</table>

The overall results of the multiple regressions show the Importance scales, Satisfaction scales and gap scores do not have a significant relationship to retention. Therefore, the overall null hypothesis cannot be rejected. However, some of the results of the tests of its sub-hypotheses show significant relationships. The multiple regression of the importance scales revealed two factors with significance; Instructional Effectiveness and Safety. There was also an indication that Campus Climate and Campus Life might be related to retention at a lesser level. The regression of the satisfaction scales revealed one significant factor, Student Centeredness, that was related to retention.

*Sub-Hypothesis Testing Results*

Analysis of the first null sub-hypothesis. The first null sub hypothesis was:

$H_{01a}$. There is no significant relationship between the reported importance given Academic Advising, the satisfaction derived and student retention.

The result of the regression for the importance of Academic Advising and retention showed no significant relationship ($\beta=.054$, $t=.323$, $p=.747$). In this study, the importance of Academic Advising was not significantly related to student retention. See Table 7.
No significant relationship between the reported satisfaction given Academic Advising and student retention appeared in the regression results (Beta=-.008, t=-.071, p=.944). See Table 8.

The result of the regression was not significant (Beta=.055, t=1.042, p=.299). The gap score of Academic Advising was not significant in relation to student retention. See Table 9.

*Analysis of the second null sub-hypothesis.* The second null sub hypothesis was:

**Ho1b.** There is no significant relationship between the reported importance given Campus Climate, the satisfaction derived and student retention.

The result of the regression for the importance of Campus Climate and retention is approaching significance (Beta=.835, t=1.891, p=.060). The *Sig.* value of .060 is near the .05 level of significance, which suggests some relationship between the importance of Campus Climate and student retention. See Table 7.

No significant relationship between the reported satisfaction given Campus Climate and student retention appeared in the regression results (Beta=-.014, t=-.041, p=.967). See Table 8.

The result of the regression is approaching significance for the gap scores (Beta=.633, t=1.926, p=.056). The *Sig.* of .056 suggests that the gap score of Campus Climate might be related to student retention. See Table 9.

*Analysis of the third null sub-hypothesis.* The third null sub hypothesis was:

**Ho1c.** There is no significant relationship between the reported importance given Campus Life, the satisfaction derived and student retention.
The result of the regression for the importance of Campus Life and retention is not significant (Beta=.267, t=-1.827, p=.069). See Table 7.

No significant relationship between the reported satisfaction given Campus Life and student retention appeared in the regression results (Beta=.002, t=.012, p=.990). See Table 8.

The result of the gap regression is not significant (Beta=-.218, t=-1.500, p=.136). See Table 9.

*Analysis of the fourth null sub-hypothesis.* The fourth null sub hypothesis was:

**Ho1d.** There is no significant relationship between the reported importance given Campus Support Services, the satisfaction derived and student retention.

The result of the regression for the importance of Campus Support Services and retention is not significant (Beta=.055, t=.285, p=.776). See Table 7.

No significant relationship between the reported satisfaction given Campus Support Services and student retention appeared in the regression results (Beta=.117, t=.659, p=.511). See Table 8.

The result of the regression for the gap between the importance of and satisfaction with Campus Support Services and student retention was not significant (Beta=-.120, t=-.717, p=.474). See Table 9.

*Analysis of the fifth null sub-hypothesis.* The fifth null sub-hypothesis was:

**Ho1e.** There is no significant relationship between the reported importance given Concern for the Individual, the satisfaction derived and student retention.

The result of the regression for the importance of Concern for the Individual and retention was not significant (Beta=.219, t=1.067, p=.287). See Table 7.
No significant relationship appeared between the reported satisfaction given Concern for the Individual and student retention appeared in the regression results (Beta= -.068, t= -.328, p= .744). See Table 8.

The result of the regression for the gap between the importance of and satisfaction with Concern for the Individual and student retention was not significant (Beta= .175, t= 1.016, p= .311). See Table 9.

*Analysis of the sixth null sub-hypothesis.* The sixth null sub hypothesis was:

Ho$_{1f}$. There is no significant relationship between the reported importance given Instructional Effectiveness, the satisfaction derived and student retention.

The result of the regression for the importance of Instructional Effectiveness and retention was significant (Beta= .566, t= -2.150, p= .033). There is a relationship between the importance students have for Instructional Effectiveness and student retention. Thus, this null sub-hypothesis is rejected. See Table 7.

No significant relationship appeared between the reported satisfaction given Instructional Effectiveness and student retention in the regression results (Beta= -.032, t= -.154, p= .878). See Table 8.

The result of the gap regression between the importance of and satisfaction with Instructional Effectiveness and student retention was not significant (Beta= -.084, t= -.472, p= .637). See Table 9.

*Analysis of the seventh null sub-hypothesis.* The seventh null sub hypothesis was:

Ho$_{1g}$. There is no significant relationship between the reported importance given Recruitment and Financial Aid Effectiveness, the satisfaction derived and student retention.
The result of the regression for the importance of Recruitment and Financial Aid Effectiveness and retention was not significant (Beta=.145, t=.960, p=.338). See Table 7.

No significant relationship was found between the reported satisfaction given Recruitment and Financial Aid Effectiveness and student retention appeared in the regression results (Beta=.090, t=.696, p=.487). See Table 8.

The result of the gap regression between the importance of and satisfaction with Recruitment and Financial Aid Effectiveness and student retention was not significant (Beta=.086, t=.748, p=.456). See Table 9.

*Analysis of the eighth null sub-hypothesis.* The eighth null sub hypothesis was:

\[H_0^{1h} \text{ There is no significant relationship between the reported importance given Registration Effectiveness, the satisfaction derived and student retention.}\]

The result of the regression for the importance of Registration Effectiveness and retention is not significant (Beta=.152, t=.762, p=.447). See Table 7.

No significant relationship appeared between the reported satisfaction given Registration Effectiveness and student retention in the regression results (Beta=.033, t=.205, p=.838). See Table 8.

The result of the gap regression between the importance of and satisfaction with Registration Effectiveness and student retention was not significant (Beta=-.191, t=-1.353, p=.178). See Table 9.

*Analysis of the ninth null sub-hypothesis.* The ninth null sub hypothesis was:

\[H_0^{1} \text{ There is no significant relationship between the reported importance given Responsiveness to Diverse Populations, and student retention.}\]
The result of the regression for the importance of Responsiveness to Diverse Populations and retention is not significant (Beta=.028, t=.593, p=.553). See Table 7.

The instrument did not contain an evaluation of the satisfaction with responsiveness to diverse populations. Therefore, this portion of the sub-hypothesis could not be tested.

With no measure of satisfaction with responsiveness to diverse populations, this portion of the null sub-hypothesis could not be tested.

*Analysis of the tenth null sub-hypothesis.* The tenth null sub hypothesis was:

$H_{0i}$ There is no significant relationship between the reported importance given Safety and Security, the satisfaction derived and student retention.

The result of the regression for the importance of Safety and Security and retention was significant (Beta=-.358, t=-2.656, p=.009). There is a relationship between the importance of Safety and Security and student retention, and this null sub-hypothesis is rejected. See Table 7.

No significant relationship was found between the reported satisfaction given Safety and Security and student retention in the regression results (Beta=-.137, t=-1.168, p=.244). See Table 8.

The result of the gap regression between the importance of and satisfaction with Safety and Security and student retention was not significant (Beta=-.056, t=-.499, p=.618). See Table 9.

*Analysis of the eleventh null sub-hypothesis.* The eleventh null sub hypothesis was:

$H_{0k}$ There is no significant relationship between the reported importance given Service Excellence, the satisfaction derived and student retention.
The result of the regression for the importance of Service Excellence and retention was not significant (Beta=.043, t=-.162, p=.871). See Table 7.

No significant relationship appeared between the reported satisfaction given Service Excellence and student retention in the regression results (Beta=-.450, t=-1.647, p=.101). See Table 8.

The result of the gap regression between the importance of and satisfaction with Service Excellence and student retention was not significant (Beta=.211, t=.964, p=.336). See Table 9.

Analysis of the twelfth null sub-hypothesis. The final null sub hypothesis was:

Ho_{11}. There is no significant relationship between the reported importance given Student Centeredness, the satisfaction derived and student retention.

The result of the regression for the importance of Student Centeredness and retention was not significant (Beta=-.274, t=-1.050, p=.295). See Table 7.

The result of the regression for the satisfaction with Student Centeredness and student retention was significant (Beta=.512, t=2.280, p=.024). There is a relationship between the satisfaction of Student Centeredness and student retention, and this null hypothesis is rejected. See Table 8.

The result of the regression for the gap score with Student Centeredness and student retention was significant (Beta=.690, t=-3.340, p=.001). The relationship between the gap score of Student Centeredness and student retention confirms the rejection of the twelfth null hypothesis. See Table 9.

Importance scale summary. The purpose of a multiple regression is to learn more about the predictability of a relationship between several independent variables and the
dependent variable (Aron & Aron, 2002). The multiple regression run on the importance scales reveal significant predictive relationships between retention and the factors of Instructional Effectiveness and Safety, and potential relationships between retention and the factors of Campus Climate and Campus Life. Students perceive instructional effectiveness as important, and that reflects on their potential for success in persisting as students. The same can be said for the importance of a safe campus.

*Satisfaction scale summary.* The results of the multiple regression run on the satisfaction scales revealed two variables, Safety and Service Excellence that have some relationship to student retention, but, Student Centeredness was the only variable with a significant relationship.

The results of the multiple regression showed two gaps between reported importance and satisfaction that may have some impact on the predictability on student retention. Those are found in Campus Climate and Student Centeredness. The gap shows the difference between the importance score and the satisfaction with score for each of the factors. The Campus Climate gap scale is on the cusp of significance and Student Centeredness resulted in a significant relationship with student retention. This means that the difference between the importance of and the satisfaction with campus climate was important to students, and impacted their decision to stay. The importance of a student to feel the sense of student centeredness and the satisfaction with the same impacted a student’s decision to stay is significant.
### Table 7

**Regression of Importance Scales**

<table>
<thead>
<tr>
<th>Scale</th>
<th>B</th>
<th>S.E.</th>
<th>Beta</th>
<th>T</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advising</td>
<td>.028</td>
<td>.085</td>
<td>.054</td>
<td>.323</td>
<td>.747</td>
</tr>
<tr>
<td>Climate</td>
<td>.435</td>
<td>.230</td>
<td>.835</td>
<td>1.891</td>
<td>.060</td>
</tr>
<tr>
<td>Life</td>
<td>-.123</td>
<td>.068</td>
<td>-.267</td>
<td>-1.827</td>
<td>.069</td>
</tr>
<tr>
<td>Support</td>
<td>.027</td>
<td>.096</td>
<td>.055</td>
<td>.285</td>
<td>.776</td>
</tr>
<tr>
<td>Concern</td>
<td>.111</td>
<td>.104</td>
<td>.219</td>
<td>1.067</td>
<td>.287</td>
</tr>
<tr>
<td>Instruction</td>
<td>-.309</td>
<td>.144</td>
<td>-.566</td>
<td>-2.150</td>
<td>.033</td>
</tr>
<tr>
<td>Financial</td>
<td>.072</td>
<td>.075</td>
<td>.145</td>
<td>.960</td>
<td>.338</td>
</tr>
<tr>
<td>Registration</td>
<td>.079</td>
<td>.104</td>
<td>.152</td>
<td>.762</td>
<td>.447</td>
</tr>
<tr>
<td>Diversity</td>
<td>.012</td>
<td>.020</td>
<td>.028</td>
<td>.593</td>
<td>.553</td>
</tr>
<tr>
<td>Safety</td>
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<td>.067</td>
<td>-.358</td>
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<td>Service</td>
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<td>-.043</td>
<td>-.162</td>
<td>.871</td>
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<td>Centeredness</td>
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<td>.133</td>
<td>-.274</td>
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<td>.295</td>
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</tbody>
</table>
### Table 8

**Regression of Satisfaction Scales**

<table>
<thead>
<tr>
<th>Scale</th>
<th>B</th>
<th>S.E.</th>
<th>Beta</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advising</td>
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<td>.047</td>
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<td>-.071</td>
<td>944</td>
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<tr>
<td>Climate</td>
<td>-.007</td>
<td>.161</td>
<td>-.014</td>
<td>-.041</td>
<td>.967</td>
</tr>
<tr>
<td>Life</td>
<td>.001</td>
<td>.074</td>
<td>.002</td>
<td>.012</td>
<td>.990</td>
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<tr>
<td>Support</td>
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<td>.117</td>
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<td>Center</td>
<td>.242</td>
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<td>.512</td>
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<td>.024</td>
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</table>
Table 9

Regression of Gap Scales

<table>
<thead>
<tr>
<th>Scale</th>
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<th>Beta</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
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<td>.299</td>
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<td>Climate</td>
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<td>.633</td>
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<td>.056</td>
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<td>Life</td>
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<td>.072</td>
<td>-.218</td>
<td>-1.500</td>
<td>.136</td>
</tr>
<tr>
<td>Support</td>
<td>-.064</td>
<td>.089</td>
<td>-.120</td>
<td>-.717</td>
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<tr>
<td>Concern</td>
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<td>.083</td>
<td>.175</td>
<td>1.016</td>
<td>.311</td>
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<tr>
<td>Instruction</td>
<td>-.048</td>
<td>.101</td>
<td>-.084</td>
<td>-.472</td>
<td>.637</td>
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<tr>
<td>Financial</td>
<td>.039</td>
<td>.052</td>
<td>.086</td>
<td>.748</td>
<td>.456</td>
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<tr>
<td>Registration</td>
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<td>-.056</td>
<td>-.499</td>
<td>.618</td>
</tr>
<tr>
<td>Service</td>
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<td>.116</td>
<td>.211</td>
<td>.964</td>
<td>.336</td>
</tr>
<tr>
<td>Center</td>
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<td>.107</td>
<td>-.690</td>
<td>-3.340</td>
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</table>

Summary Research Question One
The multiple regression of the importance scales reveal two factors with significance; Instructional Effectiveness and Safety. There is also an indication that Campus Climate and Campus Life are important to a lesser level. The satisfaction scales reveal one significant factor, Student Centeredness.

Research Question Two Findings
The second research hypothesis and supporting sub hypothesis were analyzed by running a multiple regression. In this section of the chapter, the results of testing the
overall hypothesis are addressed, followed by the analysis of each of the sub-
hypothesis.

The second research question was: Did student reports of the importance of selected enrollment factors have a relationship with the decision to enroll. The corresponding null hypothesis was:

$H_0^2$ There is no significant relationship between student reports of the importance of selected enrollment factors and the decision to enroll.

The multiple regression on the importance of selected enrollment factors with the decision to enroll did not show a significant goodness of fit with the model. The correlation between observed and predicted values is low at .227. See Table 10:

Table 10

<table>
<thead>
<tr>
<th>Enrollment Factors Model Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

*Tests of the sub-hypothesis.*

The first sub null hypothesis was:

$H_0^{2a}$ There is no significant relationship between the reported importance given Cost and the decision to enroll.

The result of the regression was not significant ($Beta= .049$, $t= .860$, $p=.390$). See Table 11.

The second sub null hypothesis was:
Ho2b  There is no significant relationship between the reported importance given Academic Reputation and the decision to enroll.

The result of the regression was not significant (Beta=-.015, t=-.239, p=.811). See Table 11.

The third sub null hypothesis was:

Ho2c  There is no significant relationship between the reported importance given Financial Aid and the decision to enroll.

The result of the regression was significant (Beta=.123, t=2.103 p=.036). This means there is a relationship between the importance given Financial Aid and the decision to enroll, and this null sub-hypothesis is rejected. See Table 11.

The fourth sub null hypothesis was:

Ho2d  There is no significant relationship between the reported importance given Geographic Setting and the decision to enroll.

The result of the regression was not significant (Beta=-.001, t=-.013, p=.989). The $t$ value is large with a low $Sig.$ value. This would suggest that the Size of the Institution does have an impact on the decision to enroll, however it is not enough to be significant. See Table 11.

The fifth sub null hypothesis was:

Ho2e  There is no significant relationship between the reported importance given the Size of the Institution and the decision to enroll.

The result of the regression was not significant (B=.095, t=1.684, p=.093). The $t$ value is large with a low $Sig.$ value. This would suggest that the Size of the Institution does have an impact on the decision to enroll, however it is not enough to be significant. See Table 11.

The sixth sub null hypothesis was:
Ho2f There is no significant relationship between the reported importance given Campus Appearance and the decision to enroll. The result of the regression was significant, (Beta= 0.132, t= 2.063, P= 0.040) which means there is a relationship between Campus Appearance and the decision to enroll. Thus, this null sub-hypothesis was rejected. See Table 11.

The seventh sub null hypothesis was:

Ho2g There is no significant relationship between the reported importance given Personalized Attention prior to enrollment and the decision to enroll.

The result of the regression was not significant (Beta= -0.090, t= -1.509, P= 0.132). See Table 11.

The eighth sub null hypothesis was:

Ho2h There is no significant relationship between the reported importance given Recommendations from Family and Friends and the decision to enroll.

The result of the regression was not significant (Beta= -0.009, t= -0.141, P= 0.888). See Table 11.

The ninth sub null hypothesis was:

Ho2i There is no significant relationship between the reported importance given the Opportunity to Play Sports and the decision to enroll. The result of the regression was significant (Beta= -0.123, t= -2.254, P= 0.025). There is a relationship between the importance given the Opportunity to Play Sports and the decision to enroll, which leads to the rejection of this null sub-hypothesis. See Table 11.
Table 11

Regression of Enrollment Factors

<table>
<thead>
<tr>
<th>Scale</th>
<th>B</th>
<th>S.E.</th>
<th>Beta</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sport</td>
<td>.026</td>
<td>.012</td>
<td>-.123</td>
<td>-2.254</td>
<td>.025</td>
</tr>
<tr>
<td>Financial Aid</td>
<td>.037</td>
<td>.018</td>
<td>.123</td>
<td>2.103</td>
<td>.036</td>
</tr>
<tr>
<td>Appearance</td>
<td>.035</td>
<td>.017</td>
<td>.132</td>
<td>2.063</td>
<td>.040</td>
</tr>
<tr>
<td>Size</td>
<td>.024</td>
<td>.015</td>
<td>.095</td>
<td>1.684</td>
<td>.093</td>
</tr>
<tr>
<td>Pattern</td>
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<td>.016</td>
<td>-.090</td>
<td>-1.509</td>
<td>.132</td>
</tr>
<tr>
<td>Cost</td>
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<td>.022</td>
<td>.049</td>
<td>.860</td>
<td>.390</td>
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<td>Reputation</td>
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<td>.020</td>
<td>-.015</td>
<td>-.239</td>
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<td>Recommendation</td>
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<td>.015</td>
<td>-.009</td>
<td>-.141</td>
<td>.888</td>
</tr>
<tr>
<td>Setting</td>
<td>.000</td>
<td>.012</td>
<td>-.001</td>
<td>-.013</td>
<td>.989</td>
</tr>
</tbody>
</table>

Summary Research Question Two

Research Question Two was: Did student reports of the importance of selected enrollment factors have a relationship with the decision to enroll? The corresponding null hypothesis was: There is no significant relationship between reports of the importance of selected enrollment factors and the decision to enroll. The multiple regression summary indicated no ‘goodness of fit’ of the overall model, but Financial Aid, Campus Appearance and Opportunity to play sports had a significant relationship to the decision to enroll. Financial Aid had a positive significant outcome meaning that the amount of Financial Aid offered was a positive factor due to the minimal cost of the regional campuses. Campus Appearance had a positive significant impact on the decision to enroll. The Opportunity to Play Sports had a negative significant impact. As most campuses do not have extensive athletic programs, those students are not apt to
enroll at the regional campuses. The Size of the Institution may have an impact on the predictability on the decision to enroll, but that could not be determined in this study.

**Research Question Three Findings**

The third research question was: Did student demographics have a relationship with student retention? The corresponding null hypothesis was:

\[ H_{03} \quad \text{There is no significant relationship between student demographics and student retention.} \]

**Tests of the null sub-hypotheses**

A Chi Square was run on each sub hypothesis to assess the association between the dependent variable of student retention and each of the selected demographic variables. The results of the Chi Square show the degree of difference between what is expected and what is observed.

The first sub null hypothesis was:

\[ H_{03a} \quad \text{There is no significant relationship between Gender and student retention.} \]

The result of the Chi Square was not significant \((X^2 = 0.011, \text{df}=1, p=0.917)\). This means that there is not a relationship between Gender and student retention. See Table 12. In each case approximately 70 percent of the participants were retained. See Table 13:
Table 12

**Chi-Square Gender and Retention**

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>Df</th>
<th>Asymp.Sig (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>.011(b)</td>
<td>1</td>
<td>.917</td>
</tr>
<tr>
<td>Continuity Corr(a)</td>
<td>.000</td>
<td>1</td>
<td>.992</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>.011</td>
<td>1</td>
<td>.917</td>
</tr>
<tr>
<td>Linear-by-linear</td>
<td>.011</td>
<td>1</td>
<td>.917</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>573</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 13

**Cross-tabulation Gender and Retention**

<table>
<thead>
<tr>
<th>Gender</th>
<th>Count</th>
<th>Female</th>
<th>Male</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Retained</td>
<td>105</td>
<td>63</td>
<td>168</td>
<td></td>
</tr>
<tr>
<td>Retained</td>
<td>255</td>
<td>150</td>
<td>405</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>360</td>
<td>213</td>
<td>573</td>
<td></td>
</tr>
</tbody>
</table>

The second sub null hypothesis was:

\[ H_{03b} \] There is no significant relationship between age and student retention.

The result of the Chi Square was not significant \( X^2 = 9.272, \text{ df}=1, \ p=.055 \), but it approached significance at the .05 level. There might be some relationship between retention and a student’s age. See Table 14. This instrument was for traditional age students, so should have all reported as being 18 to 23 years of age. A handful of students reported themselves as being in other age groups. Perhaps, regardless of their
age, they identified themselves as traditional students. See Table 15. A second Chi-
Square run with the non-traditional age students taken out of the computation, the result
is significant. \(X^2=6.545(b), df=1, p=.011\). See Table 16.

Table 14

<table>
<thead>
<tr>
<th>Chi-Square Age and Retention</th>
<th>Value</th>
<th>df</th>
<th>Asymp.Sig (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>9.272(a)</td>
<td>4</td>
<td>.055</td>
</tr>
<tr>
<td>Continuity Corr</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>9.175</td>
<td>4</td>
<td>.057</td>
</tr>
<tr>
<td>Linear-by-linear</td>
<td>4.032</td>
<td>1</td>
<td>.045</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>573</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 15

<table>
<thead>
<tr>
<th>Cross-tabulation Age and Retention</th>
<th>Age</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>18 and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Under</td>
<td></td>
</tr>
<tr>
<td>Not Retained</td>
<td>61</td>
<td>103</td>
</tr>
<tr>
<td>(Table 15 continued)</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Retained</td>
<td>104</td>
<td>291</td>
</tr>
<tr>
<td>Total</td>
<td>165</td>
<td>394</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>573</td>
<td></td>
</tr>
</tbody>
</table>
Table 16

<table>
<thead>
<tr>
<th>Chi-Square Traditional Age and Retention</th>
<th>Value</th>
<th>df</th>
<th>Asymp.Sig (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>6.545</td>
<td>1</td>
<td>.011</td>
</tr>
<tr>
<td>Continuity Corr</td>
<td>6.036</td>
<td>1</td>
<td>.014</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>6.384</td>
<td>1</td>
<td>.012</td>
</tr>
<tr>
<td>Linear-by-linear</td>
<td>6.533</td>
<td>1</td>
<td>.011</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>573</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The third null hypothesis was:

\( H_{03c} \): There is no significant relationship between ethnicity and student retention.

The result of the Chi Square was not significant (\( X^2 = 3.028, \ df = 5, p = .696 \)). See Table 17.

Ninety-five percent of the participants were Caucasian. See Table 18. A second Chi-Square run with two ethnic groupings, Caucasian and other did not result in significant findings (\( X^2 = .283, \ df = 1, p = .595 \)). See Table 19.
Table 17

**Chi-Square Ethnicity and Retention**

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>Df</th>
<th>Asymp. Sig (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>3.028(a)</td>
<td>5</td>
<td>.696</td>
</tr>
<tr>
<td>Continuity Corr</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>3.395</td>
<td>5</td>
<td>.639</td>
</tr>
<tr>
<td>Linear-by-linear</td>
<td>1.336</td>
<td>1</td>
<td>.248</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>571</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 18

**Cross-tabulation Ethnicity and Retention**

<table>
<thead>
<tr>
<th>Count</th>
<th>Age</th>
<th></th>
<th></th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>African American</td>
<td>Hispanic</td>
<td>Caucasian</td>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Not Retained</td>
<td>3</td>
<td>0</td>
<td>156</td>
<td>8</td>
<td>167</td>
</tr>
<tr>
<td>Retained</td>
<td>8</td>
<td>2</td>
<td>382</td>
<td>12</td>
<td>404</td>
</tr>
<tr>
<td>Total</td>
<td>11</td>
<td>2</td>
<td>538</td>
<td>20</td>
<td>571</td>
</tr>
</tbody>
</table>
Table 19

Chi-Square Caucasian and Retention

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>Df</th>
<th>Asymp.Sig (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>.283</td>
<td>1</td>
<td>.595</td>
</tr>
<tr>
<td>Continuity Corr</td>
<td>.112</td>
<td>1</td>
<td>.738</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>.276</td>
<td>1</td>
<td>.599</td>
</tr>
<tr>
<td>Linear-by-linear</td>
<td>.282</td>
<td>1</td>
<td>.595</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>571</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The fourth sub null hypothesis was:

\[ H_{03,d} \quad \text{There is no significant relationship between enrollment status and student retention.} \]

The result of the Chi Square was significant \( \chi^2 = 6.734 \), \( df = 2 \), \( p = .035 \), leading to the rejection of this null sub-hypothesis. See Table 20. The majority of the students participating were day students (80%). See Table 21.
Table 20

**Chi-Square Enrollment Status and Retention**

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>Df</th>
<th>Asymp.Sig (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>6.732(a)</td>
<td>2</td>
<td>.035</td>
</tr>
<tr>
<td>Continuity Corr</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>6.964</td>
<td>2</td>
<td>.031</td>
</tr>
<tr>
<td>Linear-by-linear</td>
<td>2.933</td>
<td>1</td>
<td>.087</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>534</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 21

**Cross-tabulation Enrollment Status and Retention**

<table>
<thead>
<tr>
<th>Count</th>
<th>Day</th>
<th>Evening</th>
<th>Weekend</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Retained</td>
<td>129</td>
<td>22</td>
<td>1</td>
<td>152</td>
</tr>
<tr>
<td>Retained</td>
<td>296</td>
<td>86</td>
<td>0</td>
<td>382</td>
</tr>
<tr>
<td>Total</td>
<td>425</td>
<td>108</td>
<td>1</td>
<td>534</td>
</tr>
</tbody>
</table>

The fifth sub null hypothesis was:

H₀₃ₐ: There is no significant relationship between class load and student retention.

The result of the Chi Square was significant ($X^2=11.227$, df=1, p=.001). This means that there is a predictive relationship between class load and student retention. The null sub-
hypothesis was rejected. See Table 22. The results show that 90 percent of the students participating were enrolled full time. See Table 23.

Table 22

**Chi-Square Class Load and Retention**

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>Df</th>
<th>Asymp.Sig (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>11.227(b)</td>
<td>1</td>
<td>.001</td>
</tr>
<tr>
<td>Continuity Corr(a)</td>
<td>10.230</td>
<td>1</td>
<td>.001</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>10.373</td>
<td>1</td>
<td>.001</td>
</tr>
<tr>
<td>Linear-by-linear</td>
<td>11.207</td>
<td>1</td>
<td>.001</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>570</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 23

**Cross-tabulation Class Load and Retention**

<table>
<thead>
<tr>
<th>Current Load</th>
<th>Count</th>
<th>Full-Time</th>
<th>Part-Time</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Retained</td>
<td>139</td>
<td>28</td>
<td>167</td>
<td></td>
</tr>
<tr>
<td>Retained</td>
<td>373</td>
<td>30</td>
<td>403</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>512</td>
<td>58</td>
<td>570</td>
<td></td>
</tr>
</tbody>
</table>
The sixth sub null hypothesis was:

\[ H_{05f} \text{ There is no significant relationship between class level and student retention.} \]

The result of the Chi Square was significant (\(X^2 = 31.013, df = 6, p = .000\)), indicating a strong relationship between class level and student retention. The null sub-hypothesis is rejected. See Table 24. A review of the class levels revealed that 46 percent of the participants were freshman, of those 66 percent were retained to the following fall. There were 23 percent sophomores of which 67 percent were retained. Juniors made up 16 percent of the participants and were retained at a 83 percent level, and finally, seniors made up 11 percent of the participants and of that 91 percent either continued to attend the following fall or met their goals and completed their degree. See Table 25. A second Chi-Square was run omitting the students who identified themselves as a special student, graduate or professional student or other. The results remained significant. See Table 26.
Table 24

*Chi-Square Class Level and Retention*

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymp.Sig (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>31.013(a)</td>
<td>6</td>
<td>.000</td>
</tr>
<tr>
<td>Continuity Corr</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>34.035</td>
<td>2</td>
<td>.000</td>
</tr>
<tr>
<td>Linear-by-linear</td>
<td>2.035</td>
<td>1</td>
<td>.154</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>573</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 25

*Cross-tabulation Class Levels and Retention*

<table>
<thead>
<tr>
<th>Class Level</th>
<th>Count</th>
<th>Fresh</th>
<th>Soph</th>
<th>Junior</th>
<th>Senior</th>
<th>Special</th>
<th>Grad</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Retained</td>
<td>168</td>
<td>91</td>
<td>42</td>
<td>16</td>
<td>6</td>
<td>0</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retained</td>
<td>405</td>
<td>174</td>
<td>87</td>
<td>76</td>
<td>57</td>
<td>1</td>
<td>1</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>573</td>
<td>265</td>
<td>130</td>
<td>92</td>
<td>63</td>
<td>1</td>
<td>1</td>
<td>21</td>
<td></td>
</tr>
</tbody>
</table>
The seventh sub null hypothesis was:

\[ H_{05} \text{ There is no significant relationship between GPA (grade point average) and student retention.} \]

The result of the Chi Square was significant \((X^2 = 19.975, \text{ df}=5, p=.001)\). The relationship between GPA and student retention means that this null sub-hypothesis is rejected. See Table 27. Of the students participating 30 percent were in their first quarter and therefore had no GPA. The 2 percent of the participants who had a GPA of 1.99 or less 38 percent were retained to the next fall. Students with a GPA between 2.0 and 2.49 made up 11 percent of the participants and were retained at a 64 percent level. Students with a GPA between 2.5 and 2.99 made up 19 percent of the participants and were retained at a 72 percent level. Students with a GPA between 3.0 and 3.49 made up 23 percent of the participants and were retained at a 79 percent level. Finally, students with
a GPA of 3.5 or over made up 14 percent of the participants and were retained at a 81 percent level. See Table 28.

Table 27

<table>
<thead>
<tr>
<th>Chi-Square GPA and Retention</th>
<th>Value</th>
<th>df</th>
<th>Asymp.Sig (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>19.975(a)</td>
<td>5</td>
<td>.001</td>
</tr>
<tr>
<td>Continuity Corr</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>19.650</td>
<td>5</td>
<td>.001</td>
</tr>
<tr>
<td>Linear-by-linear</td>
<td>13.673</td>
<td>1</td>
<td>.000</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>569</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 28

<table>
<thead>
<tr>
<th>Cross-tabulation GPA and Retention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
</tr>
<tr>
<td>-------------------------------------</td>
</tr>
<tr>
<td>Not Retained</td>
</tr>
<tr>
<td>Retained</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

The eighth sub null hypothesis was:
Ho₃: There is no significant relationship between educational goal and student retention.

The result of the Chi Square was significant ($X^2=20.096$, df=7, $p=.005$). There is a predictive relationship between educational goal and student retention, and the null sub-hypothesis is rejected. See Table 29. Sixty-two percent of the students who participated and had a goal of an Associates Degree were retained to the following fall. Seventy-five percent of the students who participated and had a goal of a Bachelors Degree were retained to the following fall. Those with a goal of Masters Degree and Doctoral Degree were also retained at a 70 percent level. Students with other undefined goals were retained at a 45 percent rate. See Table 30.

Table 29

<table>
<thead>
<tr>
<th>Chi-Square Educational Goal and Retention</th>
<th>Value</th>
<th>df</th>
<th>Asymp.Sig (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>20.096(a)</td>
<td>7</td>
<td>.005</td>
</tr>
<tr>
<td>Continuity Corr</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>19.844</td>
<td>7</td>
<td>.006</td>
</tr>
<tr>
<td>Linear-by-linear</td>
<td>5.868</td>
<td>1</td>
<td>.015</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>565</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 30

Cross-tabulation Educational Goal and Retention

<table>
<thead>
<tr>
<th>Count</th>
<th>Associate Degree</th>
<th>Bachelor Degree</th>
<th>Master Degree</th>
<th>PhD</th>
<th>Cert.</th>
<th>Self</th>
<th>Job</th>
<th>other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Retained</td>
<td>29</td>
<td>77</td>
<td>29</td>
<td>15</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>14</td>
<td>167</td>
</tr>
<tr>
<td>Retained</td>
<td>47</td>
<td>230</td>
<td>72</td>
<td>35</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>11</td>
<td>398</td>
</tr>
<tr>
<td>Total</td>
<td>76</td>
<td>307</td>
<td>101</td>
<td>50</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>25</td>
<td>565</td>
</tr>
</tbody>
</table>

The ninth sub null hypothesis was:

\[ H_{05i} \] There is no significant relationship between employment and student retention.

The result of the Chi Square was not significant \( (X^2=1.539, \ df=4, \ p=.820) \). The null sub-hypothesis cannot be rejected. See Table 31. Of those students attending and working full-time, 74 percent were retained to the following fall. Of those students working part-time, 70 percent were retained to the following fall. Those students who were unemployed had a 66 percent retention rate. See Table 32. Running a second Chi Square combining working full-time on and off-campus and working part-time on and off-campus did not result as a significant factor. See Table 33.
Table 31

**Chi-Square Employment and Retention**

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymp. Sig (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>1.539(a)</td>
<td>4</td>
<td>.820</td>
</tr>
<tr>
<td>Continuity Corr</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>1.551</td>
<td>4</td>
<td>.818</td>
</tr>
<tr>
<td>Linear-by-linear</td>
<td>.925</td>
<td>1</td>
<td>.336</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>572</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 32

**Cross-tabulation Employment and Retention**

<table>
<thead>
<tr>
<th>Count</th>
<th>Full Time On Campus</th>
<th>Part Time On Campus</th>
<th>Full Time</th>
<th>Part Time</th>
<th>Unemployed</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Retained</td>
<td>28</td>
<td>100</td>
<td>1</td>
<td>6</td>
<td>33</td>
<td>168</td>
</tr>
<tr>
<td>Retained</td>
<td>79</td>
<td>239</td>
<td>4</td>
<td>16</td>
<td>66</td>
<td>404</td>
</tr>
<tr>
<td>Total</td>
<td>107</td>
<td>339</td>
<td>5</td>
<td>22</td>
<td>99</td>
<td>572</td>
</tr>
<tr>
<td>Table 33</td>
<td>Chi-Square Employment Full or Part Time and Retention</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>------------------------------------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Value</td>
<td>df</td>
<td>Asymp.Sig (2-sided)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Chi-Square</td>
<td>1.402</td>
<td>2</td>
<td>.496</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>1.401</td>
<td>2</td>
<td>.496</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linear-by-linear</td>
<td>.925</td>
<td>1</td>
<td>.336</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>572</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Summary Research Question Three**

The third research question was: Did student demographics have a relationship with student retention? A Chi Square was performed on each sub hypothesis. Gender, ethnicity and the employment status of a student had no relationship to student retention. Age was very close to a significant level. Student Status (attending day, evening or weekend classes), Load (attending full time or part time), Level (freshman, sophomore, junior, senior), GPA, and Educational Goal (Associate degree, Bachelor's etc) had significant relationships with student retention.

**Research Question Four Findings**

The last research question was, Is there a relationship between initial college expectation, experience and their satisfaction with their decision to attend and student retention?

The corresponding overall null hypothesis was:
Ho4 THERE IS NO SIGNIFICANT RELATIONSHIP BETWEEN STUDENT EXPECTATIONS OF COLLEGE, THEIR EXPERIENCE, THEIR DECISION TO ATTEND AND STUDENT RETENTION.

A ‘T’ test was used to analyze each of the sub-hypotheses related to this overall hypothesis. A ‘T’ test evaluates the difference in means between those who persisted and those who did not and the independent variables.

The first sub null hypothesis was:

Ho4a THERE IS NO SIGNIFICANT RELATIONSHIP BETWEEN STUDENT EXPECTATIONS OF COLLEGE AND STUDENT RETENTION.

The result of the ‘T’ test was significant. Student expectations of their college experiences, are significantly related to retention as indicated by p=.000 with a confidence level that does not include a ‘0’. This null sub-hypothesis is rejected. See Table 34. Participants who rated their expectations of their college experience as much worse, quite a bit worse or worse than expected were retained at an average of 58 percent rate. Those participants who rated their expectations as about, better, quite a bit better and much better than expected were retained at an average of 72 percent rate. See Table 35.
Table 34

*T Test for Expectations and Retention*

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
<th>=0</th>
</tr>
</thead>
<tbody>
<tr>
<td>95% Confidence Interval Of the Difference</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T</td>
<td>df</td>
<td>Sig.(2-tailed)</td>
</tr>
<tr>
<td>Expectations</td>
<td>99.957</td>
<td>601</td>
</tr>
<tr>
<td>Retained</td>
<td>37.134</td>
<td>574</td>
</tr>
</tbody>
</table>

Table 35

*Cross-tabulation Expectations and Retention*

<table>
<thead>
<tr>
<th>Count</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Retained</td>
<td>0</td>
<td>3</td>
<td>15</td>
<td>69</td>
<td>39</td>
<td>23</td>
<td>19</td>
<td>168</td>
</tr>
<tr>
<td>Retained</td>
<td>3</td>
<td>4</td>
<td>19</td>
<td>166</td>
<td>127</td>
<td>30</td>
<td>49</td>
<td>398</td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
<td>7</td>
<td>34</td>
<td>235</td>
<td>166</td>
<td>53</td>
<td>68</td>
<td>566</td>
</tr>
</tbody>
</table>
The second sub null hypothesis was:

\[ H_{0b} \quad \text{There is no significant relationship between student satisfaction with their experience of college and student retention.} \]

The result of the ‘T’ test was significant. The relationship between satisfaction with one’s college experience was indicated by \( p=0.000 \) with a confidence level that does not include a ‘0’. This null sub-hypothesis is rejected. See Table 36. Students who reported; neutral, somewhat, satisfied and very satisfied were retained at an average of 71 percent rate. Those students reporting; not, not very or somewhat dissatisfied were retained at an average of 59 percent rate. See Table 37.

Table 36

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
<th>Sig.(2-tailed)</th>
<th>Mean</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expectations</td>
<td>119.872</td>
<td>601 .000</td>
<td>5.530</td>
<td>5.44</td>
<td>5.62</td>
</tr>
<tr>
<td>Retained</td>
<td>37.134</td>
<td>574 .000</td>
<td>.706</td>
<td>.67</td>
<td>.74</td>
</tr>
</tbody>
</table>

**T Test for Satisfaction and Retention**

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
<th>=0</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>95% Interval</td>
</tr>
<tr>
<td>T</td>
<td>df</td>
<td>Sig.(2-tailed)</td>
</tr>
<tr>
<td>Expectations</td>
<td>119.872</td>
<td>601 .000</td>
</tr>
<tr>
<td>Retained</td>
<td>37.134</td>
<td>574 .000</td>
</tr>
</tbody>
</table>
Table 37

Cross-tabulation Satisfaction and Retention

<table>
<thead>
<tr>
<th>Count</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Retained</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td>21</td>
<td>41</td>
<td>67</td>
<td>27</td>
<td>168</td>
</tr>
<tr>
<td>Retained</td>
<td>1</td>
<td>2</td>
<td>15</td>
<td>39</td>
<td>85</td>
<td>188</td>
<td>68</td>
<td>398</td>
</tr>
<tr>
<td>Total</td>
<td>2</td>
<td>7</td>
<td>21</td>
<td>60</td>
<td>126</td>
<td>255</td>
<td>95</td>
<td>566</td>
</tr>
</tbody>
</table>

The third sub null hypothesis was:

Ho₄c There is no significant relationship between student satisfaction with choice of college and student retention.

The result of the ‘T’ test was significant at the p=.000 level. The null sub-hypothesis is rejected. See Table 38. Seventy-two percent of students participating who; didn’t know, maybe, probably and definitely would enroll if they had it to do over again were retained. Fifty-nine percent of those who probably would not attend given a second choice were retained. See Table 39.
Table 38

*T Test Right Decision and Retention*

<table>
<thead>
<tr>
<th></th>
<th>Test Value = 0</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Of the Difference</td>
</tr>
<tr>
<td></td>
<td>T</td>
<td>df</td>
</tr>
<tr>
<td>Expectations</td>
<td>95.079</td>
<td>600</td>
</tr>
<tr>
<td>Retained</td>
<td>37.134</td>
<td>574</td>
</tr>
</tbody>
</table>

Table 39

*Cross-tabulation Decision and Retention*

<table>
<thead>
<tr>
<th></th>
<th>Count</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Retained</td>
<td></td>
<td>3</td>
<td>7</td>
<td>9</td>
<td>25</td>
<td>25</td>
<td>54</td>
<td>45</td>
<td>168</td>
</tr>
<tr>
<td>Retained</td>
<td></td>
<td>3</td>
<td>16</td>
<td>10</td>
<td>44</td>
<td>42</td>
<td>148</td>
<td>134</td>
<td>397</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>6</td>
<td>23</td>
<td>19</td>
<td>69</td>
<td>67</td>
<td>202</td>
<td>179</td>
<td>565</td>
</tr>
</tbody>
</table>
Summary of Research Question Four

Research Question four was: Is there a relationship between initial college experience, satisfaction and decision to attend and student retention? In each case t-tests revealed a significant relationship between the independent variables and student retention.

Summary Analysis of Data and Findings

This chapter analyzed the data and findings. First the responses and retention by campus were reviewed. Then frequencies of the scales were reviewed to determine the participation in each area. Then each research question was analyzed.

The first research question involved the relationship between student reports of the importance of and satisfaction of factors on the Noel Levitz: Student Satisfaction Survey 4-year College and University Version and their retention at a regional campus. After running multiple regressions on the Importance, Satisfaction and Gap scales, three variables (Instructional Effectiveness, Safety and Student Centeredness) were shown to have significant relationships with student retention. The Importance of Instructional Effectiveness and Safety and Security are significant. The Satisfaction with Student Centeredness is significant. The implications of these are discussed in the following chapter.

The second research question was: Did student reports of the importance of selected enrollment factors have a relationship on the decision to enroll. Two variables, the Importance of Financial Aid and the Appearance of the Campus, were found to be significant in the decision to enroll.
The third research question was: Did student demographics have a relationship with student retention? The results showed that five variables; Status, Load, Level, GPA and Goal have a significant relationship with student retention.

The fourth and final research question was: Is there a relationship between initial college expectation, satisfaction with experiences, and their decision to attend with student retention. The results indicated that each of the variables has a significant relationship with student retention.

The next chapter contains, first a discussion of these data and statistical analysis. Next, the implications of the study are discussed followed by the limitations of the study. Finally, recommendations for practice and recommendations for further study will conclude the chapter.
CHAPTER FIVE: DISCUSSION AND CONCLUSIONS

Retaining students is central to the continued financial health of an institution of higher learning. The factors influencing students to persist and complete their education vary due to individual characteristics, the environment of the institution, and the student perceptions of their experiences.

Much research has been done on student retention at traditional, selective, residential campuses. Limited research has been done from a commuter environment, and the majority of that research has been from a community college perspective. A commuter campus of a four-year institution presents a mix of factors from both residential and community colleges.

The purpose of this study was to determine the factors that relate to student retention from one fall quarter to the next at the regional campuses and centers of Ohio University. The data used in this study were derived from a survey of traditional students who attended one of those regional campuses or centers during Fall quarter 2005. The regional campuses and centers of Ohio University were treated as a system and not individual sites for this study.

The researcher divided the population of traditional students by those who persisted to be registered for classes from September 2005 to the following Fall quarter, September 2006, and those who did not. The primary focus was on the relationship between student’s responses to the importance of, and satisfaction with the twelve factors of college enrollment and student retention.

Participation was encouraged but not required. Students were asked to complete only one survey per campus attended. The identification number used on the instrument
was the student’s social security number. The data were reviewed to insure that there was no duplication of results in students responding multiple times.

The instrument measured student perceptions of importance and satisfaction on twelve different scales. Instruments were sent to the company for analysis. The data were downloaded into the Statistical Package for Social Sciences (SPSS).

The purpose of this chapter is to discuss the data and statistical analysis done in Chapter Four. A summary of the study and discussion of the findings from each of the research questions is presented followed by a consideration of the implications of the findings. Finally recommendations for practice and recommendations for further study are suggested.

Frequencies were run initially for both the Importance Scales and the Satisfaction Scales (Table 3 and 4). Each scale is made up of four to seventeen questions throughout the survey instrument. The questions were combined and divided by the number involved to be renamed as the scales. The instrument measured the Importance of and Satisfaction with the scales on a 7 point Likert scale with 1=not important/satisfied to 7=very important/satisfied.

As discussed in Chapter Four, students identified scales important to them by both score and level of participation. The students in this study considered Student Centeredness, Academic Advising and Registration Effectiveness to be most important. This is validated both by a high response rate to these items and a response on the Importance scale between 6.0 and 6.2. The mean score for all but one scale fell in the 5.8-6.2 range. That scale was Campus Life with a mean score of 5.5.
The frequencies for the Satisfaction Scales were generally lower, with mean scores ranging from 4.4 (positive side of neutral) to 5.5 (5.0 = somewhat satisfied and 6.0 = satisfied). Students were most satisfied with Service Excellence followed by Academic Advising, Campus Climate, Support Services and Registration Effectiveness.

There is little discrepancy between the scales students indicated most important and the scales measuring the highest satisfaction. The Importance Scale mean is 6.0 and the Satisfaction Scale mean is 5.2. This is an indication that typically the scales show there is not a large disparity between the Importance of and Satisfaction with scales in the instrument. Those items that students found important were also items that they were satisfied with. The gap scores would then be small.

**Results and Discussion of the First Null Hypothesis**

The first null hypothesis was:

\( H_0: \) There is no significant relationship between student reports of the importance of and their satisfaction with retention factors on the *Noel Levitz: Student Satisfaction Survey 4-year College and University Version* and their retention at a regional campus.

The comprehensive regression model summary showed no significant goodness of fit for the model, but the importance, satisfaction, or gap between importance and satisfaction on several scales was related to retention. Following are the results of the tests on those significant sub-hypotheses of Null Hypothesis One.

\( H_{01a}: \) There is no significant relationship between the reported importance given Academic Advising, the satisfaction derived, and student retention.
The Gap regression shows the Academic Advising variable \( (\text{Beta}=0.132, t=1.042, \text{Sig}=0.299) \) has some impact on the predictability of student retention based on the strength of the \( t \) score and the difference between the \( t \) and the \( \text{sig} \). It does not however indicate a significant relationship.

\[ \text{Ho}_{1b} \text{. There is no significant relationship between the reported importance given Campus Climate, the satisfaction derived, and student retention.} \]

Both the Importance (\( \text{Beta}=0.835, t=1.891 \text{ Sig}=0.060 \)) and Gap (\( \text{Beta}=0.633, t=1.926 \text{ Sig}=0.056 \)) regressions show the Campus Climate variable is on the cusp of a significant relationship to student retention. Campus Climate assesses the extent to which the institution provides experiences that promote a sense of campus pride and feelings of belonging (Levitz, R. S., Noel, L., 2006). While Campus Climate does not show significance, it seems to indicate both of what Ohio University regional campus students value, and are somewhat satisfied with.

\[ \text{Ho}_{1c} \text{. There is no significant relationship between the reported importance given Campus Life, the satisfaction derived, and student retention.} \]

The Importance regression show Campus Life (\( \text{Beta}=-0.267, t=-1.827, \text{Sig}=0.069 \)) variable is on the cusp of a significant relationship to student retention. The \( t \) value indicates the direction of the relationship. In this case the relationship is negative. The Gap regression indicates that if there is no significant level of Campus Life, and it is not important, then students are less apt to be disappointed in its absence. Campus Life measures factors such as residence life and orientation. The negative numbers indicate an inverse relationship. The regional campuses and centers do not provide a residence life component to the education process.
H₀₁. There is no significant relationship between the reported importance given to Instructional Effectiveness, the satisfaction derived, and student retention.

The Importance regression (Beta=-.566, t=-2.150, .033) show the variable Instructional Effectiveness is significant in relation to student retention. The negative ‘t’ value identifies the direction of the relationship. This scale measures the effectiveness of full and part time faculty. This indicates the more important Instructional Effectiveness is to a student, the less likely it is that they will stay at a regional campus.

H₀₂. There is no significant relationship between the reported importance given Safety and Security, the satisfaction derived, and student retention.

The Importance regression (Beta=-.358, t=-2.656, Sig.=.009) showed a significant relationship between the variable of Safety and Security and student retention. This means the more important safety and security is to a student, the less likely it is they will stay.

H₀₃. There is no significant relationship between the reported importance given Student Centeredness, the satisfaction derived, and student retention.

Both the Satisfaction (Beta=.512, t=2.280, Sig.=.024)and Gap (Beta=-.690, t=-3.340, Sig.=.001) regressions show a significant relationship between Student Centeredness and student retention. This scale measures the institution’s success at making students feel welcome and valued. This shows satisfied students are likely to stay. The inverse is true with the Gap scores.
Summary of the Tests of the First Null Hypothesis

The first null hypothesis identified two scales nearing significance. Both Campus Climate and Campus Life had strong relationships to student retention. As noted, Campus Life is inversely related meaning the direction of the relationship. The more important Campus Life is to a student, the less likely it is they will stay. As regional campuses and centers are commuter campuses, this is logical. Tinto discusses “the absence of sufficient contact with other members of the institution proves to be the single most important predictor of eventual departure” (Tinto, p.56). This impacts the Campus Climate and is reinforced by this research. The importance of Instructional Effectiveness and Safety are both inversely significant. The more students value these two factors, the higher the likelihood they will not stay.

Traditional students have many opportunities in higher education. One might think that students who tie a high importance to Instructional Effectiveness would look for a selective institution. The regional campuses and their centers are open admissions. The traditional students choosing to attend here either did not meet the academic standards for admittance to a selective institution, or didn’t have the interest in doing so. Safety and Security may be looked at with a similar lens. Students with a high value for Safety and Security may look to a residential campus or one with a visible police presence. At the time of this survey only one campus had any security presence.

Student Centeredness is positively significant. The importance of how a campus values it’s students impacts student retention. Howard and Jones (2000) reported that 80% of students who were not retained reported no meaningful personal contact with any campus office, faculty or staff member.
Correlations show the strength of the relationships between factors. Correlations run on the Importance, Satisfaction and Gap scales illustrated many strong inter-relationships. With so many factors involved, it is difficult to identify specific factors.

Campus Life is not a factor on regional campuses, however the Campus Climate, Instructional Effectiveness, Safety and Security and Student Centeredness are all factors that campuses can review and address to positively impact student retention on their campuses and in their centers.

The importance of Responsiveness to Diverse Populations was not found to be significant. Curiously, the instrument did not include a evaluation of the satisfaction with the Responsiveness to Diverse Populations. There was no explanation for this omission identified.

**Results and Discussion of the Second Null Hypothesis**

The second null hypothesis was:

$$H_0$$ There is no significant relationship between student reports of the importance of selected enrollment factors and the decision to enroll.

The comprehensive regression model showed no significant goodness of fit, but the tests of some of the sub-hypotheses showed significant relationships with retention. Following are the results of the significant tests on those significant sub-hypothesis of Null Hypothesis Two.

The correlating sub null hypotheses are:

$$H_{0c}$$ There is no significant relationship between the reported importance given Financial Aid and the decision to enroll.
The result of the multiple regression was significant. (Beta=.123, t= 2.103 p=.036) This means there is a relationship between the importance given Financial Aid and the decision to enroll. The null sub-hypothesis is rejected.

This scale involves the importance of Financial Aid at face value, whereas the first research question involved a scale about the registration and financial aid process. The process is not significant in student retention; however, the financial aid itself is significant.

$H_0_{2f}$ There is no significant relationship between the reported importance given Campus Appearance and the decision to enroll.

The result of the regression was significant (Beta=.132, t= 2.063, P=.040), and the null hypothesis was rejected. This clearly illustrates the importance of making the campus appearance a priority. A positive first impression is critical.

$H_0_{2i}$ There is no significant relationship between the reported importance given the Opportunity to Play Sports and the decision to enroll.

The result of the regression was significant (Beta=-.123, t=-2.254, P=025). The negative nature of the $Beta$ and $t$ indicate an inverse relationship between the importance given the Opportunity to Play Sports and the decision to enroll. The null sub-hypothesis is rejected.

**Summary of the Tests of the Second Null Hypothesis**

In this case, three of the sub-hypothesis were rejected. Financial aid, campus appearance and the opportunity to play sports all had significant relationships with retention. The campuses and centers of Ohio University should pay attention to these factors. Factors that are important to a student’s decision to enroll are important to maintain so they stay enrolled. The financial strength of the institution is tied directly to
student enrollment and the tuition dollars they pay. Once a student is recruited it is much more cost efficient to retain them, and then recruit their replacements.

Results and Discussion of the Third Null Hypothesis

The third overall null hypothesis was:

Ho3. There is no significant relationship between student demographics and student retention.

Following are the results of the tests on those significant sub-hypothesis of Null Hypothesis Three.

The sub null hypotheses were:

Ho3b There is no significant relationship between age and student retention.

The result of the Chi Square is not significant ($X^2 = .9.272$, df=1, p=.055), but the relationship between age and retention is near significance. This instrument put ages in categorical format. This instrument is for traditional age students. The population is focused by definition in the ‘under 18’ and ’19-24’ age groups. Age is not a factor the campuses can effect and therefore not critical in this discussion.

Ho3d There is no significant relationship between enrollment status and student retention.

The result of the Chi Square was significant ($X^2 = 6.734$, df=2, p=.035). This means there is a predictive relationship between enrollment status and student retention. Enrollment status identified whether a student attended day, evening or weekend. Upon further analysis, 80% of the students responding to this question were day students and 70% of the students responding to this question persisted. The null hypothesis is rejected.
There is no significant relationship between class load and student retention.

The result of the Chi Square was significant ($X^2=11.227$, df=1, $p=.001$). There is a predictive relationship between class load and student retention. Class load identified whether a student attended full-time or part-time. Nearly 90% of the students attend full time. Nearly 73% of those attending full time persisted. The null hypothesis is rejected.

There is no significant relationship between class level and student retention.

The result of the Chi Square was significant ($X^2=31.013$, df=6, $p=.000$). This means there is a predictive relationship between class level and student retention. Class level identified whether a student was a freshman, sophomore, junior, senior, special student, graduate student or other. Further analysis of this question revealed that 90% of the senior level students persisted, 83% of the juniors, 67% of the sophomores, and 66% of the freshman students on a regional campuses and centers who responded to the survey persisted. The null hypothesis is rejected.

There is no significant relationship between GPA (grade point average) and student retention.

The result of the Chi Square was significant($X^2=19.975$, df=5, $p=.001$), revealing a predictive relationship between GPA and student retention. GPA was identified by six categories ranging from 3.5 or higher to less than 1.9. There was an additional category for no credits earned, which would indicate students in their first quarter in school. As one might expect, those with the higher GPA had a higher retention rate. (3.5 and higher = 81% retained; less than 1.9 = 39% retention rate) Students with no recorded credits
had a retention rate of 64%. The null hypothesis is rejected. This supports the findings of Okun & Finch (1998) who reported by far, the strongest predictor of institutional departure was cumulative GPA. As GPA increased, the likelihood of leaving decreased.

**Ho3h** There is no significant relationship between educational goal and student retention.

The result of the Chi Square was significant ($X^2 = 20.096, \text{df} = 7, p = .005$). This means there is a predictive relationship between educational goal and student retention. Educational Goal is identified as; Associate degree, Bachelor’s degree, Master’s degree, Doctorate or professional degree, certificate, self-improvement, job-related training or other. In this case it doesn’t appear what the goal is impacted retention, but having a goal. The null hypothesis is rejected. This supports the research done by Mohammadi (1996) whose work on community colleges found that goals for attending college are a strong predictor of retention followed by the number of hours taken a semester, hours completed and overall GPA.

**Summary of the Tests of the Third Null Hypothesis**

The third null hypothesis identifies the relationship between student demographics and student retention. A Chi Square is performed on each sub hypothesis. Gender, ethnicity and the employment status of a student had no relationship to student retention. Age is very close to significant. Student Status (attending day, evening or weekend classes), Load (attending full time or part time), Level (freshman, sophomore, junior, senior), GPA, and Educational Goal (Associate degree, Bachelors etc) all had significant results indicating a relationship with student retention.

It stands to reason that class level would be a significant indicator of retention. As one moves though the class structure, one is more likely to be committed to complete. As
a freshman or sophomore it may be easier to stop out or transfer, however, once a student becomes a junior or senior, institutional commitment is stronger and stopping becomes a more difficult task.

The demographic factors a campus can impact are minimal. Encouraging students to attend full time may be an area the campus can impact. Helping students identify Education Goals does have the possibility to positively impact student retention.

**Results and Discussion of the Fourth Null Hypothesis**

The fourth overall null hypothesis was:

\[ H_0^4 \] There is not significant relationship between student expectations of college, their experience, their decision to attend and student retention.

Following are the results of the tests on those significant sub-hypothesis of Null Hypothesis Four.

The corresponding sub null hypotheses were:

\[ H_0^{4a} \] There is no significant relationship between student expectations of college and student retention.

The result of the ‘T’ test was significant. The majority of responses for this question rated 4 “*About what I expected*” and 5 “*Better than I expected*”. The null hypothesis is rejected. Students come to an institution with some expectation of what it is going to be like. Students with realistic expectations are more likely to be retained as students than those with unrealistic expectations who are disappointed or disillusioned with the reality.

\[ H_0^{4b} \] There is no significant relationship between student satisfaction with their experience of college and student retention.
The result of the ‘T’ test was significant. In this case 84% of the students responded that they were *somewhat satisfied, satisfied* or *very satisfied*, and 72% of those students were retained. The null hypothesis is rejected. Students who attend a college or university and have a good experience, tend to be retained.

$H_{04c}$ There is no significant relationship between student satisfaction with choice of college and student retention.

The result of the ‘T’ test was significant. Of the students responding to this question 67% responded that they would *definitely or probably* enroll there again, 74% of those were retained. The null hypothesis is rejected

**Summary of the Fourth Null Hypothesis**

The fourth null hypothesis described the relationship between initial college experience, satisfaction and decision to attend and student retention. In each case there is a significant relationship between the independent variables and student retention. All three of these factors are significant in predicting retention of student retention. None of them are factors that a campus or center can impact.

**Implications for Practice**

Loyola adopted a philosophy that retention serves as a measure of student learning. It demonstrates how well integrated students are in campus life and how effectively the campus delivers what the students expect and need (Voigt, 2000). While Loyola, New Orleans, is a residential campus, the concept may be applied to the regional campuses and centers of Ohio University.

**First Null Hypothesis**

In summary, there are a number of areas that show significant findings. From the first research question, four of the importance scales show a relationship with student
retention. Campus climate, Instructional Effectiveness, Safety and Security and Student Centeredness all have significant relationship with student retention.

Clearly the environment a campus provides is critical in student retention. Campus climate, the institution’s sense of pride, and making students feel like they belong has a direct relationship with student retention. This includes how the campus communicates with students. If every campus kept this in the forefront of their thinking, they can affect in a positive way student behavior and increase student retention. Every staff person, instructor and administrator can, and should, have a role to play to provide a positive Campus Climate. We are talking here about the human connection. A student on the receiving end of someone from the campus, reaching out and knowing the student is there. A positive campus climate lets the student know they are not in this journey alone. Talking with students outside the classroom; providing opportunities for gatherings of students and faculty off campus grounds are just two ways to improve Campus Climate.

Instructional Effectiveness is an area in which regional campuses need to work on perception. The implication is that the more important Instructional Effectiveness is, the less likely a student will persist on a regional campus or center. The regional campuses and centers of Ohio University adhere to policies and procedures to insure quality full and part time instructors are in the classroom.

Safety and Security assesses responsiveness to student safety as well as the safety of the facilities. Again, this is something every campus can address to minimize the number of students who do not persist because they do not feel safe at the campus. Do an audit of your campus, walk around the exterior of the buildings and make sure the
campus is well lit in the evenings. Walk around the parking areas at night and see if they are well lit and free of debris.

Finally, Student Centeredness, the degree to which students feel they are important to the institution has a relationship with student retention. Many of the same strategies mentioned will support these efforts as well. Communicating with students through regular e-mails and newsletters, and asking them to contribute will increase the degree to which they feel important and therefore integrated in the institution.

Second Null Hypothesis

The second null hypothesis addresses enrollment factors as they related to retention. There are three factors that proved to be significant in increasing student retention. The amount of financial aid is an area that impacts student retention. Although the process is not the factor, increasing knowledge of the process as well as any scholarship opportunities may increase the amount of aid a student receives. Academic advisors can be instrumental in this role, making it part of their advising conversations.

Campus appearance is another area that has a significant impact on retention. The more important campus appearances are to a student, the more attention to detail the student will give the campus. When a campus looks good on the surface, it is enough to satisfy those students who give moderate importance to appearance. To those students who give a great deal of importance to appearance, those students keep looking closer for problems, or less than perfect situations. Under scrutiny, no campus is perfect all the time. Each campus needs to determine what level of cleanliness is acceptable for them. Certainly some key areas should be maintained at a very high level. Clean restrooms are critical, and should be evaluated on a regular basis. Often faculty and staff do not use the
same facilities that students use. A regular walk around campus and all the facilities, with campus appearance in mind is a good method to see where the areas of need are.

There is also a significant relationship between the opportunity to play sports and retention. As the importance of playing sports increases, the likelihood of being retained decreases. The regional campuses of Ohio University do offer a limited athletic program. If a student is interested in playing a sport offered, it is a great opportunity for being involved in the college community. If playing sports is very important to a student, then the program and facilities at a regional campus may be too limited to satisfy those students for long. The campuses are doing what they are able in this area, and play an important role in increasing general student retention by offering the opportunity. For those students who will leave because a sport is not offered, or they are not in the conference they want to compete in, there is not much the institution can do to keep them.

**Third Null Hypothesis**

The next area, demographics, there are a number of areas that are significant predictors for retention, however, it is nothing institutions can affect. Enrollment status is a significant factor, however, attending full or part time, or time of day a student attends is more factor of the rest of their life demands, work, family, and so on. A full time student has made the commitment to make their education a priority. Class Load and Class Level are also significant. What that tells us, is the farther along a student gets in their program, the more committed they will be to finish it. Not surprisingly, GPA (grade point average) is also a predictor of retention. A campus can work with student services and faculty to give students the support services they may need. If not already in place, a system to identify academically at-risk students and work to provide the services needed to support a student’s success.
Educational goal is also a prediction of retention. This is an area that campuses can address in a number of ways. Assuring students know where they are headed, will assure a plan for them be successful. College success classes (UC 116) is one area where this can be addressed. A course such as Career and Life Planning (EDCE 201) is another class that helps students explore their interests, strengths and values to determine college majors and career interests. Advisors are critical in this area, in helping students choose classes that will expose them to areas of interest, and make a plan to achieve their goal. Finally, each campus has a contact with the career office on the Athens Campus. Using those resources with students may help those undecided to solidify their goals.

*Fourth Null Hypothesis*

Finally, a student’s expectation of the college experience, their satisfaction with the college experience and their satisfaction with their decision are all significant predictors’ student retention. While a campus can not do much to effect a student’s expectation of the college experience, once a student is in attendance, finding out what those expectations are, can assist a campus in increasing student satisfaction. Once again, this goes back to making a connection with the student. While the academic advisor is the obvious point person for this, it is the responsibility for every member of the faculty and staff to make it a priority to connect with students.

*The Overall Research Question*

The overall research question is: Is there a relationship between student reports of their perceived importance and satisfaction with retention factors, their perceived importance of enrollment factors, and their demographic characteristics, with their actual retention at the regional campuses and centers of Ohio University over a two-year period? As discussed, there is a relationship between the importance of some factors and
retention, there is a relationship between some enrollment factors and retention and there is a relationship between some demographic characteristics and retention.

_Focusing on Factors that Can Be Changed_

There are many factors impacting a student’s decision to persist. This research has identified some of the factors that impact student retention at the regional campuses of Ohio University. Some of them the institution can do nothing about. There are however, many factors the campuses can develop strategies to impact.

_Institutional Effectiveness:_ Associate Dean and Division Coordinators should evaluate on a quarterly basis all class evaluations. Campuses should consider as needed, a mentorship program for faculty who might need such assistance.

_Campus Safety and Security:_ Campuses can do an audit of their buildings and grounds. Walk around the buildings at night to assess the lighting. Determine what steps need to be taken on each campus to increase the feeling of safety and security.

_Campus Climate and Student Centeredness:_ Making students feel like they belong is critical in student retention. Every staff person, instructor and administrator is critical in impacting the environment of the campus. Each campus community can do an audit of what they are currently doing, and what areas have room for improvement.

_Campus Appearance:_ Each campus should do an audit in this area as well.

_Educational Goal:_ Each campus and student service staff should make this a priority for students. Helping student identify their goals is critical in their retention. This can be done through a program including the advisor, classes such as UC 116 and EDCE 201, career planning staff and internship programs.
RECOMMENDATIONS FOR RESEARCH

This research is a snapshot of students attending the fall 2005 and measuring their retention to the fall of 2006. It does not extend past one year and should be repeated on a regular basis to assess any changes in the results. This would indicate areas of improvement for the campuses, or changing values in the students.

This research involved the regional campuses and centers of Ohio University. The results can not be generalized to other institutions. Perhaps this model may be replicated in another venue.

This research involved only the traditional age student. The demographics of the regional campuses and centers are closely split between traditional and non-traditional students. The non-traditional students should be evaluated as well to see if they find the same factors important as the traditional students.

This research involved only those traditional aged students who included their identification numbers on the survey instrument. The research project could be replicated with non-traditional students.

Additional work can be done to further identify what factors impact retention on the regional campuses of Ohio University. First, when the satisfaction instrument is given on the campuses, it is given to both the traditional population, and the non-traditional population. Only the traditional population is used in this study, but the non-traditional student population makes up a large portion of the student body of the regional campuses. The total response level for the non-traditional population is nearly the same size as the traditional rate. The data is already captured, so this study could be replicated using the non-traditional population.
As mentioned in the discussion, there are a number of questions in the survey that do not apply to the regional campus student. In many cases, students just skipped those questions. By skipping the questions, the data from that scale is automatically deleted from the statistical analysis. By looking at the instrument, pulling some of those questions out of the analysis would increase the number of data points in the analysis. Steps would need to be taken to insure that did not affect the reliability and validity of the instrument.

A third area of additional study may be to look at each of the regional campuses and centers individually. This would give each campus the ability to identify specific areas to be addressed. The data is already captured, and with the exception of the Chillicothe Campus, analysis could parallel this study.

Finally, this study may be replicated in another regional campus system to assess if the results transfer from institution to institution.
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APPENDIX A:

STUDENT SATISFACTION INVENTORY
Dear Student,

Your institution is interested in systematically listening to its students. Therefore, your thoughtful and honest responses to this inventory are very important.

You are part of a sample of students carefully selected to share feedback about your college experiences thus far. Your responses will give your campus leadership insights about the aspects of college that are important to you as well as how satisfied you are with them.

To preserve confidentiality, your name is not requested. — Thank you for your participation.

**Instructions:**
- Use a No. 2 pencil only. Please do not use ink or ballpoint pen.
- Erase changes completely and cleanly.
- Completely darken the oval that corresponds to your response.

Each item below describes an expectation about your experiences on this campus. On the left, tell us how important it is for your institution to meet this expectation. On the right tell us how satisfied you are that your institution has met this expectation.

<table>
<thead>
<tr>
<th>Importance (1 = not important at all; 5 = very important)</th>
<th>My level of satisfaction (1 = not satisfied at all; 5 = very satisfied)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Most students feel a sense of belonging here.</td>
<td>1. Library staff are helpful and approachable.</td>
</tr>
<tr>
<td>2. The campus staff are caring and helpful.</td>
<td>2. Adequate financial aid is available for most students.</td>
</tr>
<tr>
<td>3. Faculty care about us as individuals.</td>
<td>3. Library resources and services are adequate.</td>
</tr>
<tr>
<td>4. Admission staff are knowledgeable.</td>
<td>4. My academic advisor helps me set goals to work toward.</td>
</tr>
<tr>
<td>5. Financial aid counselors are helpful.</td>
<td>5. The business office is operating hours which are convenient for most students.</td>
</tr>
<tr>
<td>6. My academic advisor is approachable.</td>
<td>6. My academic advisor is concerned about my success as an individual.</td>
</tr>
<tr>
<td>7. The campus is safe and secure for all students.</td>
<td>7. The staff in the health services are competent.</td>
</tr>
<tr>
<td>8. The location of the campus within my major is valuable.</td>
<td>8. This institution is my major field of excellence.</td>
</tr>
<tr>
<td>9. A variety of extracurricular activities are offered.</td>
<td>9. My academic advisor is concerned about my success as an individual.</td>
</tr>
<tr>
<td>10. Administrative offices are approachable to students.</td>
<td>10. The staff in the health services are competent.</td>
</tr>
<tr>
<td>11. Tuition policies are reasonable.</td>
<td>11. The location of the campus within my major is valuable.</td>
</tr>
<tr>
<td>12. Financial aid counselors are helpful.</td>
<td>12. The staff in the health services are competent.</td>
</tr>
</tbody>
</table>

2521932
102. Gender:
1. Female
2. Male

103. Age:
1. 18 and under
2. 19 to 24
3. 25 to 34
4. 35 to 44
5. 45 and over

104. Ethnicity/Race:
1. African-American
2. American Indian or Alaskan Native
3. Asian or Pacific Islander
4. Caucasian/White
5. Hispanic
6. Other
7. Prefer not to respond

105. Current Enrollment Status:
1. Full-time
2. Part-time
3. Evening
4. Weekend

106. Current Class Load:
1. Full-time
2. Part-time

107. Class Level:
1. Freshman
2. Sophomore
3. Junior
4. Senior
5. Special Student
6. Graduate/Professional
7. Other

108. Current GPA:
1. No credits earned
2. 1.00 or below
3. 2.00 - 2.49
4. 2.50 - 2.99
5. 3.00 - 3.49
6. 3.50 or above

109. Educational Goal:
1. Associate degree
2. Bachelor's degree
3. Master's degree
4. Doctorate or professional degree
5. Certification (initial or renewal)
6. Self-improvement/pleasure
7. Job-related training
8. Other

110. Employment:
1. Full-time off campus
2. Part-time off campus
3. Full-time on campus
4. Part-time on campus
5. Not employed

111. Current Residence:
1. Residence hall
2. Fraternity/Sorority
3. Own house
4. Rent room or apartment off campus
5. Parent's home
6. Other

112. Residence Classification:
1. In-state
2. Out-of-state
3. International (not U.S. citizen)

113. Disabilities:
Physical disability or a diagnosed learning disability?
1. Yes
2. No

114. When I entered this institution, it was my:
1. 1st choice
2. 2nd choice
3. 3rd choice or lower

115. Major:
Fill in major code from list provided by your institution

116. Item requested by your institution:
1.
2.
3.
4.
5.
6.
7.
8.
9.
10.

Thank you for taking the time to complete this inventory.
<table>
<thead>
<tr>
<th>Item</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>The amount of student parking space on campus is adequate.</td>
<td></td>
</tr>
<tr>
<td>Counseling staff care about students as individuals.</td>
<td></td>
</tr>
<tr>
<td>Living conditions in the residence halls are comfortable (adequate space, lighting, heat, air conditioning, telephones, etc.).</td>
<td></td>
</tr>
<tr>
<td>The intercollegiate athletic programs contribute to a strong sense of school spirit.</td>
<td></td>
</tr>
<tr>
<td>Faculty are fair and unbiased in their treatment of individual students.</td>
<td></td>
</tr>
<tr>
<td>Computer labs are adequate and accessible.</td>
<td></td>
</tr>
<tr>
<td>The personnel involved in registration are helpful.</td>
<td></td>
</tr>
<tr>
<td>Parking lots are well-lighted and secure.</td>
<td></td>
</tr>
<tr>
<td>It is an enjoyable experience to be a student on this campus.</td>
<td></td>
</tr>
<tr>
<td>Residence hall staff are concerned about me as an individual.</td>
<td></td>
</tr>
<tr>
<td>Males and females have equal opportunities to participate in intercollegiate athletics.</td>
<td></td>
</tr>
<tr>
<td>Tutoring services are readily available.</td>
<td></td>
</tr>
<tr>
<td>My academic advisor is knowledgeable about requirements in my major.</td>
<td></td>
</tr>
<tr>
<td>I am able to register for classes I need with few conflicts.</td>
<td></td>
</tr>
<tr>
<td>The assessment and course placement procedures are reasonable.</td>
<td></td>
</tr>
<tr>
<td>Security staff respond quickly in emergencies.</td>
<td></td>
</tr>
<tr>
<td>I feel a sense of pride about my campus.</td>
<td></td>
</tr>
<tr>
<td>There is an adequate selection of food available in the cafeteria.</td>
<td></td>
</tr>
<tr>
<td>I am able to experience intellectual growth here.</td>
<td></td>
</tr>
<tr>
<td>Residence hall regulations are reasonable.</td>
<td></td>
</tr>
<tr>
<td>There is a commitment to academic excellence on this campus.</td>
<td></td>
</tr>
<tr>
<td>There are a sufficient number of weekend activities for students.</td>
<td></td>
</tr>
<tr>
<td>Admissions counselors respond to prospective students' unique needs and requests.</td>
<td></td>
</tr>
<tr>
<td>Academic support services adequately meet the needs of students.</td>
<td></td>
</tr>
<tr>
<td>Students are made to feel welcome on this campus.</td>
<td></td>
</tr>
<tr>
<td>I can easily get involved in campus organizations.</td>
<td></td>
</tr>
<tr>
<td>Faculty provide timely feedback about student progress in a course.</td>
<td></td>
</tr>
<tr>
<td>Admissions counselors accurately portray the campus in their recruiting practices.</td>
<td></td>
</tr>
<tr>
<td>There are adequate services to help me decide upon a career.</td>
<td></td>
</tr>
<tr>
<td>Class change (drop/add) policies are reasonable.</td>
<td></td>
</tr>
<tr>
<td>This institution has a good reputation within the community.</td>
<td></td>
</tr>
<tr>
<td>The student center is a comfortable place for students to spend their leisure time.</td>
<td></td>
</tr>
<tr>
<td>Faculty take into consideration student differences as they teach a course.</td>
<td></td>
</tr>
<tr>
<td>Bookstore staff are helpful.</td>
<td></td>
</tr>
<tr>
<td>Major requirements are clear and reasonable.</td>
<td></td>
</tr>
<tr>
<td>The student handbook provides helpful information about campus life.</td>
<td></td>
</tr>
<tr>
<td>I seldom get the ‘run-around’ when seeking information on this campus.</td>
<td></td>
</tr>
<tr>
<td>The quality of instruction I receive in my classes is excellent.</td>
<td></td>
</tr>
<tr>
<td>This institution shows concern for students as individuals.</td>
<td></td>
</tr>
<tr>
<td>I generally know what's happening on campus.</td>
<td></td>
</tr>
<tr>
<td>Adjunct faculty are competent as classroom instructors.</td>
<td></td>
</tr>
<tr>
<td>There is a strong commitment to racial harmony on this campus.</td>
<td></td>
</tr>
<tr>
<td>Student disciplinary procedures are fair.</td>
<td></td>
</tr>
<tr>
<td>New student orientation services help students adjust to college.</td>
<td></td>
</tr>
<tr>
<td>Faculty are usually available after class and during office hours.</td>
<td></td>
</tr>
<tr>
<td>Freedom of expression is protected on campus.</td>
<td></td>
</tr>
<tr>
<td>Nearly all of the faculty are knowledgeable in their field.</td>
<td></td>
</tr>
<tr>
<td>There is a good variety of courses provided on this campus.</td>
<td></td>
</tr>
<tr>
<td>Graduate teaching assistants are competent as classroom instructors.</td>
<td></td>
</tr>
<tr>
<td>Channels for expressing student complaints are readily available.</td>
<td></td>
</tr>
<tr>
<td>On the whole, the campus is well-maintained.</td>
<td></td>
</tr>
<tr>
<td>Student activities fees are just to good use.</td>
<td></td>
</tr>
</tbody>
</table>
Your institution may choose to provide you with additional questions on a separate sheet. The section below numbered 74 - 83 is provided as a response area for those additional questions. Continue on to item 84 when you have completed this section.

**Importance to me...**

1. Not important at all
2. Not very important
3. Somewhat unimportant
4. Neutral
5. Somewhat important
6. Important
7. Very important

**My level of satisfaction**

1. Very unsatisfied
2. Somewhat unsatisfied
3. Neutral
4. Somewhat satisfied
5. Very satisfied

(If items 74-83 not available, skip to item 84.)

---

How satisfied are you that this campus demonstrates a commitment to meeting the needs of:

81. Full-time students?
82. Evening students?
83. Older, returning learners?
84. Under-represented populations?
85. Commuters?
86. Students with disabilities?

---

How important were each of the following factors in your decision to enroll here?

90. Cost
91. Financial aid
92. Academic reputation
93. Size of institution
94. Opportunity to play sports
95. Recommendations from family/friends
96. Geographic setting
97. Campus appearance
98. Personalized attention prior to enrollment

---

Choose the one response that best applies to you and darken the corresponding oval for each of the questions below.

99. So far, how has your college experience met your expectations?
1. Much worse than I expected
2. Quite a bit worse than I expected
3. Worse than I expected
4. About what I expected
5. Better than I expected
6. Quite a bit better than I expected
7. Much better than I expected

100. Rate your overall satisfaction with your experience here thus far.
1. Not satisfied at all
2. Not very satisfied
3. Somewhat dissatisfied
4. Neutral
5. Somewhat satisfied
6. Satisfied
7. Very satisfied

101. All in all, if you had it to do over again, would you enroll here?
1. Definitely not
2. Probably not
3. Maybe not
4. I don't know
5. Maybe yes
6. Probably yes
7. Definitely yes

CONTINUE TO THE NEXT PAGE