A NATIONAL STUDY OF RETENTION EFFORTS
AT INSTITUTIONS OF HIGHER EDUCATION
WITH BACCALAUREATE DEGREE
NURSING PROGRAMS

DISSERTATION

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By

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This study is concerned with the problem of determining the status of specific student retention efforts at the departmental and institutional levels in institutions of higher education offering baccalaureate degrees in nursing. The purposes of the study include (1) the determination of the percentages of those institutions which have specific programs to increase student retention in place and functioning at the various administrative levels, (2) the determination of those aspects of the many possible retention efforts that are being utilized, (3) identification of those retention efforts which may be most effective, and (4) comparison of retention rates between those institutions with organized retention programs and those without these programs.

The population of the study is composed of all 430 of the National League for Nursing (NLN) accredited, Registered Nurse Baccalaureate Degree programs in the United States. The specially designed survey instrument produced a 62 percent response return. Response frequencies and percentages
were calculated to show the relative success rates of various retention efforts. In addition, the data were subjected to several statistical procedures to determine if there were statistically significant differences between the various types and levels of retention efforts.

The findings indicate that the presence of an organized and functioning program to increase student retention does produce a statistically significant increase in the mean retention rate for those institutions with such programs as compared with those institutions without organized retention programs. This significant increase was constant across the three types or levels of retention programs surveyed (departmental level only, university level only, both university and departmental levels). The majority of the respondents (55.5 percent) do have retention programs in place and functioning at some level in their institutions. Of the six major areas of retention efforts listed on the questionnaire, the area dealing the "Administrative Activities" to increase student retention was present most often among that group of respondents with the highest retention rates.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>LIST OF TABLES</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>v</td>
</tr>
</tbody>
</table>

## Chapter

### I. INTRODUCTION

- Statement of the Problem
- Purpose of the Study
- Hypotheses
- Definition of Terms
- Assumptions of the Study
- Limitations of the Study
- Chapter Bibliography

### II. REVIEW OF THE LITERATURE

- Introduction
- The Extent of the Problem
- Student Characteristics Related to Attrition
- Background Characteristics Associated with Attrition
- Institutional Factors Related to Student Attrition
- Models and Theories of Attrition or Retention
- Successful Student Retention Programs
- Summary Evaluation of Attrition and Retention Literature
- Chapter Bibliography

### III. PROCEDURES OF THE STUDY

- Introduction
- Population of the Study
- Sampling Methods
- Development of the Survey Instrument
- Data Collection Procedures
- Data Analysis Procedures
- Summary
- Chapter Bibliography
Chapter IV. PRESENTATION AND ANALYSIS OF DATA

Statistical Analysis of the Data
Graduates from Baccalaureate Degree Nursing Programs
Presence of Retention Programs
Individual Retention Activities
Responses to Research Hypotheses
Additional Information from Questionnaire

Section II
Chapter Bibliography

Chapter V. SUMMARY, DISCUSSION OF DATA FINDINGS,
CONCLUSIONS AND RECOMMENDATIONS

Summary
Population of the Study
Statistical Procedures
Summary of the Major Findings
Discussion of the Findings
Conclusions
Recommendations
Chapter Bibliography

APPENDICES

BIBLIOGRAPHY

iv
## List of Tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Summary of Data from Baccalaureate Nursing Programs With and Without Student Retention Programs</td>
<td>76</td>
</tr>
<tr>
<td>2.</td>
<td>Retention Rates for Baccalaureate Degree Nursing Programs According to Presence of Retention Program by t-Test</td>
<td>78</td>
</tr>
<tr>
<td>3.</td>
<td>Analysis of Variance of Mean Retention Percentages for the Three Groups of Baccalaureate Degree Nursing Programs with Student Retention Programs</td>
<td>79</td>
</tr>
<tr>
<td>4.</td>
<td>Retention Activities Ranked According to Percentages of the Most Successful and the Least Successful Orientation Programs</td>
<td>112</td>
</tr>
<tr>
<td>5.</td>
<td>Retention Activities Ranked According to Percentages of the Most Successful and the Least Successful Supplemental Instruction Programs</td>
<td>113</td>
</tr>
<tr>
<td>6.</td>
<td>Retention Activities Ranked According to Percentages of the Most Successful and the Least Successful Counseling and Advising</td>
<td>114</td>
</tr>
<tr>
<td>7.</td>
<td>Retention Activities Ranked According to Percentages of the Most Successful and the Least Successful Student-Faculty Interaction</td>
<td>115</td>
</tr>
<tr>
<td>8.</td>
<td>Retention Activities Ranked According to Percentages of the Most Successful and the Least Successful Peer Interaction and Campus Involvement</td>
<td>126</td>
</tr>
<tr>
<td>9.</td>
<td>Retention Activities Ranked According to Percentages of the Most Successful and the Least Successful in Administrative Activities</td>
<td>127</td>
</tr>
</tbody>
</table>
CHAPTER I
INTRODUCTION

As colleges and universities move through the 1980s and into the 1990s they are facing institutional threats which were negligible concerns during the educational boom days of the 1960s and 1970s. Although increasing operating costs, inflation, and changes in student financial aid programs weigh heavily upon college and university administrators, the specter of stabilizing or even declining student enrollment paints a dismal picture for institutions with full-time enrollment (FTE) based budgets (McCool, 1984). Despite the fact that declining enrollments of traditional students at colleges and universities have temporarily been offset by increased enrollments of the older, married, non-traditional college student, the Carnegie Council (1980) forecasts that by 1997, there will be a 23.3 percent national decline in the 18 to 24 year old population which has generally comprised the majority of entering students. In this crisis atmosphere, the higher education establishment has been brought to the realization that when a college or university student leaves before graduation, there is a strong possibility that he or she may not be replaced.

Student retention (i.e., students who stay in the college or university and graduate) as well as its converse,
student attrition (i.e., students who leave the college or university before graduation) have been topics of research for a considerable length of time. As early as 1913, studies were being conducted in regard to the rates of attrition at American and European institutions of higher education (Tambe, 1984). While research into these topics remained relatively obscure until the 1970s, the current concerns about projected college-age student populations and decline in enrollments have produced an explosion in attrition or retention research.

Attrition or retention research has gone through several evolutionary phases during its history. The earliest research into this topic was unidimensional and focused on merely determining the rates and percentages at which students either left or stayed in college (Lonabocker, 1982; Iffert, 1957; Eckland, 1964; Jex & Merril, 1962). These types of studies remain popular even up to the present time. The research gradually evolved so that the major focus of attention concentrated on demographic factors associated with attrition and retention of college students. These studies generally paralleled the growing interest in psychology in the United States and investigated such factors as age of student population (Bragg, 1956; Tambe, 1984), sex of the student (Demos, 1986; Astin, 1978), socioeconomic status (Bynum & Thompson, 1983; Iwai & Churchill, 1982), hometown location and size (Fishman & Pasanella, 1960; Johanson &
Rossman, 1970), and a variety of other demographic factors. Closely related to the investigation of these demographic factors is the exploration of personality factors of students and how they correlate with retention and attrition. Generally, these studies are concerned with the attempt to distinguish student persisters from student dropouts at the time of admission (Blanchfield, 1971; Hudephol & Reed, 1984; McCool, 1984).

The next distinguishable phase in the evolution of attrition or retention research concentrated its investigations upon the institutions of higher education themselves. This research looked at elements of colleges and universities such as the environment (Hudephol, 1984; Kemerer, Baldridge, & Green, 1982) including housing, extracurricular activities, and student-faculty relationships. Closely aligned with these institutionally oriented studies is research into elements of faculty attitudes and advisement programs on campuses and their effect on retention rates (Buckley, 1980; Hail, 1984; Glennen & Baxley, 1985).

One phase that has been slow to evolve in attrition or retention research is the development of multi-dimensional theoretical models. Over the years, there has been a sprinkling of isolated attempts to present theories or models upon which retention studies, and more importantly, retention programs can be based (Nash, 1977; Provost, 1982; Statman, 1982). Only recently have perceptive and sound
models of student retention been developed which can form the basis for successful student retention programs (Catalano, 1985; Higgerson, 1985).

The use of true experimental designs in attrition or retention research, particularly in longitudinal studies, represents this research in its most advanced form. This research comprises a small part of the great quantity of attrition or retention research. Despite the considerable amount of information available concerning why students leave the college or university and how to keep them from leaving, there is little evidence that institutions of higher education have made any systematic attempts to implement programs that will help them keep the students they already have. If, indeed, American colleges and universities do have organized retention programs, in place and functioning, they have not allowed this information, along with success or failure rates, to become part of the mainstream of general higher education literature.

Institutions of higher education which have professionally oriented programs at their institutions (medicine, law, nursing, engineering, computer science, etc.) face some additional difficulties in relationship to student retention. These types of programs traditionally have higher "wash-out" rates which, theoretically, help maintain the high standards of that profession (Nelson, 1966). A question which is sometimes asked and deserves
consideration, especially in professional programs is, "If you could keep all your students who begin the program, would you want to?" (Wright, Garth, Waite & Johnson, 1984, p. 346).

Nonetheless, the ability of colleges and universities to maintain their enrollment numbers may very well spell their survival or demise in the near future. Without a doubt, the ability to keep the students they already have spent considerable sums of time and money recruiting will become increasingly important. This concern will be amplified in professionally oriented educational programs which traditionally are less cost effective than the general academic college-level programs. Yet, there is little evidence that specific programs to increase retention are being initiated, and if they are, little is being done to evaluate their success. With these factors in mind, the following descriptive research study, which uses a normative survey method, is proposed.

Statement of the Problem

The problem of this study is: "What is the status of specific student retention efforts at the departmental and university levels in institutions of higher education offering baccalaureate degrees in nursing?"

Purpose of the Study

The purposes of the study are:
1. To determine what percentage of those institutions of higher education with National League for Nursing (NLN) accredited baccalaureate degree nursing programs have specific programs in place and functioning to increase student retention at the institutional level.

2. To determine what percentage of those institutions of higher education with NLN accredited Baccalaureate degree nursing programs have specific programs in place and functioning to increase student retention at the departmental or divisional (nursing) level.

3. To determine what particular aspects are being utilized of the many possible aspects that student retention programs can involve in those institutions with retention programs in place and functioning.

4. To compare the nursing student retention rates of those schools with retention programs to institutions without institutional level student retention programs.

5. To compare the nursing student retention rates of those NLN accredited Baccalaureate degree nursing programs with departmental or divisional level student retention programs to the rates of those Baccalaureate degree nursing programs without departmental or divisional level student retention programs.

6. To determine the number and types of retention efforts being utilized in schools with formal retention programs.
7. To be able to identify and describe an effective retention program by the number and types of elements included in that program.

Hypotheses

To carry out the purposes of this study, the following hypotheses have been formulated:

1. The majority of the surveyed institutions of higher education with NLN accredited Baccalaureate degree nursing programs will not have specific programs to increase student retention in place and functioning at the institutional level.

2. The percentage of the surveyed institutions of higher education with Baccalaureate degree nursing programs that have specific retention programs in place and functioning at the departmental or divisional level will be less than those institutions that have retention programs at the institutional level.

3. The majority of the surveyed institutions of higher education with NLN accredited Baccalaureate degree nursing programs will not have specific retention programs to increase student retention in place and functioning at the department or divisional level.

4. The retention rates for nursing students in those NLN accredited Baccalaureate degree nursing programs that have specific retention programs in place and functioning to
increase student retention at the institutional level will be significantly higher than the rates of nursing programs that do not have any retention programs.

5. The retention rates for nursing students in those NLN accredited Baccalaureate degree nursing programs that have specific programs in place and functioning to increase student retention at the departmental or divisional level will be significantly higher than the rates of nursing programs that do not have any retention programs.

6. The retention rates of nursing students in those Baccalaureate degree nursing programs that have specific programs in place and functioning to increase student retention at the institutional level will not be significantly different from the rates of nursing programs that have retention programs at the departmental or divisional level.

Definition of Terms

The following definitions of key concepts as used in this study are presented to aid in the study's clarification and comprehension:

1. Dropout: Any student initially designated as a nursing major who does not complete the course of study for and graduate with Baccalaureate degree in nursing within four years from entry into the program. This definition includes students who may transfer to other majors and complete degrees in
those areas as well as students who, for whatever reason, take longer than four years to complete the course of study.

2. **Stop-out**: Any student initially designated as a nursing major who interrupts his or her course of study for a period of time, but who completes and eventually graduates with a Baccalaureate degree in nursing. This group will not be considered in this study.

3. **Student Retention**: The completion of a Baccalaureate degree in nursing by students designated as nursing majors within a four year period from entry into the program.

4. **Student Attrition**: Failure of a designated nursing major to complete and graduate with a Baccalururate degree in nursing within, a four year period from entry into the program.

5. **Retention Program**: A program composed of one or more retention efforts from a list of identified elements commonly found in established retention programs.

**Assumptions of the Study**

This study is based on the following assumptions:

1. The respondents place value upon increasing student retention rates.
2. There are specific activities that institutions of higher education are able to undertake to improve student retention.

3. The instrument for data collection will actually measure the variables to be studied.

4. The respondents will be familiar with the retention activities in their institutions and individual nursing programs.

5. The respondents will report the data accurately.

6. Remaining in an institution of higher education is more desirable than dropping out.

Limitations of the Study

The following limitations are present in consideration of the data from this study.

1. The instrument (questionnaire) has had only limited validation through the procedures described below (see section on instrument).

2. The instrument is a voluntary, self-reported questionnaire and depends upon the honesty and knowledge of the respondents.

3. Since the population consists of National League for Nursing accredited Registered Nurse Baccalaureate Degree Nursing program in the United States, caution must be exercised in generalizing the results to other professional programs or non-
accredited programs.

4. The study will be limited to the four year period of 1983 to 1987.
CHAPTER BIBLIOGRAPHY


CHAPTER II
REVIEW OF THE LITERATURE

Introduction

The subjects of student attrition and retention have become issues of great concern to institutions of higher education today. Due to projections for declining enrollments and shifts in post secondary enrollment patterns, many colleges and universities equate improving retention with institutional survival. These concerns have spawned a deluge of research studies, journal articles and books over the past ten years, although research into attrition and retention is almost as old as the university system itself.

The Extent of the Problem

Despite the recent inundation of literature concerning student retention and attrition, the attrition rate has remained fairly constant for the past forty years (Nash, 1977; Panos & Austin, 1968). Although there is wide variation in retention rates between elite four-year colleges and universities and community colleges, ranging from a high of ninety percent for the former to a low of five percent for the latter, a cumulative attrition rate of thirty percent over four years of education at the same institution is the average (Nash, 1977). Out of the ten
students who enter an institution of higher education, only four will graduate from that same institution four years later. One more will eventually graduate from that same institution while two more students will enroll and graduate from a different institution some years later (Iwai & Churchill, 1982). This second group of students has been informally named "stop-outs" since they eventually do complete a degree, even if not at the original institution nor within the customary four year time frame (Avakain, MacKinney & Allen, 1982). The remaining three of the original ten students who started will never obtain a degree and can be considered the true "dropouts" from higher education (Panos & Astin, 1968). Projecting those percentages on the estimated 12.2 million undergraduate students enrolled in American colleges in 1986-1987, roughly estimated 3.7 million will drop out of higher education completely (Evangelauf, 1986). Those who will not graduate from their original institution of enrollment will number some 6.1 million students.

Since considerable time, money, and effort is spent in recruitment of students, it is more cost effective to keep students already recruited than to seek replacements for the ones who leave. Recruitment costs are estimated to range between $200.00 and $800.00 per student (Kramer, 1982). At this rate, institutions in the United States will spend between $12,200,000.00 and $48,000,000.00 to recruit
students who will never graduate from these institutions. In addition, with the decline in the pool of "traditional" students, institutions of higher education will be forced to recruit from those groups that consistently have higher attrition rates and cost more to recruit (minorities, low scoring SAT) (Kramer, 1982). This creates a vicious circle in which the financial consequences of attrition actually encourages higher student dropout.

Much of the research that concentrates its attention on rates of attrition has serious limitations. Primary among the limitations is the way in which "dropout" is defined. While this is a problem in all levels of higher education, studies of attrition rates in the community college systems are most sensitive to the way in which "dropout" is defined. Willet (1983) proposed that the term "stop-out" be used to describe students who "attend an institution on an alternating basis" enrolled one semester, not enrolled the next semester, but re-enrolled perhaps a year later (p. 333). This definition does add a new dimension to understanding attrition, but also creates its own set of problems. As Panos and Astin (1986) pointed out, unless some limits are set on the definition of "dropouts," studies could not be concluded until all the participants either completed a college degree or died (p. 70).

This leads to the second limitation of studies that are primarily concerned with rates of attrition, namely, the
length of time period of the research studies themselves. In view of the fact that in a considerable number of cases the normal progression to graduation at a Baccalaureate degree granting institution is longer than the original estimation of eight consecutive semesters, the design of attrition studies needs to be altered significantly (Eckland, 1964; McCreight & LeMay, 1982). Despite this rather obvious and generally well known fact, many longitudinal studies of student attrition continue to revolve around the traditional four year progression to a degree and graduation (Puryear, 1982; Wright, Garthwaite & Johnson, 1971; Nash, 1977; Dallam & Dawes, 1981).

The third major limitation to "attrition rate" studies is the difficulty in combining the different rates from various studies in an attempt to use this information in a predictive manner. Rates of attrition vary tremendously between types of institutions (public versus private, baccalaureate versus community college) as well as within similar type institutions of varying size (Catalano, 1985; Summerskill, 1965). This limitation is seen in many types of attrition research, not only those concerned primarily with rates. It is very difficult to obtain a good "overview" or synthesis of this research which will have applicability to a wide spectrum of higher education institutions. The majority of the research focuses on one or another small element of the attrition problem, and can be
generalized only to an institution of similar size and type (Munro, 1981).

In the following analysis, the research studies are grouped together as much as possible by primary focus. While some of these studies cut across topic lines and look at several elements of the attrition problem, the majority are rather concentric in both vision and scope.

Student Characteristics Related to Attrition

Second, numerically only to research into the rates of attrition in higher education, are the studies concerned with the characteristics which render students "dropout prone." This particular body of material represents a fairly primitive form of research into this subject in that it is primarily unidimensional. In the attempt to develop a universal dropout profile, student characteristics have been examined in great detail (McCool, 1984). These characteristics are logically divided into (a) personal characteristics and (b) background factors.

Personal Characteristics of Dropout Prone Students

Self-Motivation and Student Attrition

When the reasons for withdrawal from an institution of higher learning given by students over the past five decades are analyzed and reduced, the one recurrent common denominator is a lack of motivation (Higgerson, 1985; University of Oklahoma, 1981). While an understanding of motivational
factors and levels is a key to understanding why students stay and why they leave, it is an extremely difficult characteristic to accurately measure and even more difficult to manipulate in experimental designs.

One methodological difficulty inherent in motivational studies of attrition is in the basic definition of motivation. Two fundamentally different views exist. One view perceives motivation as a positive factor or "internal state which an individual has and which directs his or her behavior in a unified way" (Willeit, 1983, p. 19). Similarly, Gallerman (1983) takes the positive view of motivation as the "perception of individual to take action" (p. 22). Wright, Garthwaite, and Johnson's (1984) study of a program established at Delgado Community College, Louisiana, which was based on increasing "self-motivation and self-deciding," demonstrated that a positive view towards motivation will aid community college students to be successful in their personal, educational, and professional undertakings.

Likewise, a study conducted by Reed (1981) on why students drop college courses demonstrated that the key element in keeping students in any given course was increasing interest in that particular course. He also identifies the student advisor as being extremely important in affecting the motivational level.
Educational Goals and College Fit

But motivation can also be viewed from the negative side which emphasizes such elements as fear of failure, expectations that the student will drop out and parental attitudes.

Studies conducted of attrition based on this negative view of motivation have produced some interesting findings, namely that: (a) the students with the highest attrition rates were those with the lowest commitment to college and education; (b) students with the highest attrition rates were those who expected to dropout; and (c) scholastic ability was not statistically related to the expectation of dropping out (Sexton, 1965; Van Hook, 1981; Maudal, Butcher, & Mauger, 1974).

Closely related to motivational elements in student retention is the consideration of student educational goals and how well these goals "fit" into a particular institution's general orientation to education.

Taylor and Whetstone (1983) found that if values, goals, and attitudes of a student were similar to those of the higher education institution he or she was attending, then the student was more likely to remain at that institution. They also discovered that motivational levels were best reflected in interest inventories which reveal a student's values, attitudes, and goals (Taylor, 1983). Among the recommendations resulting from their study was one that proposed students be tested at the high school level for those
interest inventories so that college recruiters and admissions officers could identify the students who would perform best in their institutional setting (Taylor & Whetstone, 1983).

The Marketing Model developed by Lewis, Leach, and Lutz (1983) is also based on the fit between consumer (student) and product (education). They felt that colleges and universities exist to provide programs and services which meet student needs. Demitroff (1974) had reached a similar conclusion, namely that the attrition rate increases when students are less satisfied with either the major field of study or the institution as a whole. Yet, changing majors or even changing institutions of higher education is not universally indicative of education uncertainty or predictive of attrition. A study conducted by Fullmer (1956) found that students who change their majors are actually less likely to become an attrition statistic than those who had not changed their majors.

Educational and vocational goals can logically be linked together. The general conclusions of much of the investigations into these topics is that the stronger the vocational goal, the higher the level of retention since it appears to provide a strong motivational factor for not only undertaking a particular educational program, but also for completing it (Astin, 1972; Frank & Kirk, 1975; Hanson & Taylor, 1970; Naylor & Sanford, 1982).
Sex of the Student

As an overall predictor of either attrition or retention, the sex of the student has been demonstrated to be a generally insignificant variable in most of the research. In addition, there is a considerable degree of discrepancy in the research results on the sex of students and attrition rates. Avakian, MacKinney, and Allen (1982) reached the conclusion that among full-time freshmen and transfer students, females dropped out at a smaller, but consistently higher rate than males. Also, when matched on high school GPA, women seem to have higher attrition rates than men (Pascarella, 1983; Trent & Ruyle, 1965).

In a study of 7,653 female college students and 9,652 male students conducted at the University of Tennessee, Knoxville over a five-year period, Stoner and DeRidder (1982) concluded that "more males enrolled and graduated from five-year programs such as engineering and architecture. Conversely, more females enrolled and graduated in four-year programs" (p.22). However, Tambe (1984) concluded that male students had higher attrition rates than their female counterparts, especially among minority groups. Several other studies also confirm that men drop out at higher rates than women (Demos, 1968; Panos & Astin, 1968).

The majority of these discrepancies in results can be explained by understanding that these studies are not uniform in either their approaches, study situations or cross-
variables. The particular sex of a student and his or her probability of dropping out is a factor at some institutions and not at others (Cope, 1968). While early studies indicated that the reasons for leaving the college or university were significantly different for men and women (Bayer, 1968; Cowhig, 1963; Van Hook, 1981), Lonabacker, (1982) concluded that men and women leave for the same reasons, namely personal problems, lack of money, and poor advisement.

By and of itself, the sex of the student is not useful as a predictive factor in determining attrition. When it is combined with other factors considered as important in attrition, such as age, background, institutional composition, and length of program, its importance increases.

Age of the Student

Although heavily researched in the past as an element contributing to student attrition, the age of the student is, at best, an inconclusive factor (Summerskill, 1965). Conflicting results of the research into attrition rates and student age need to be interpreted with care. In past studies, older students entering as freshmen had a lower percentage of graduation (Smith & Sugarman, 1984; Tambe, 1984). More recent research into the age of the students and their potential for graduation has shifted to a multivariable design in consideration of the traditional and non-
traditional (older, married, generally part-time) student. A study by Smith and Sugarman (1984) revealed that non-traditional students were, overall, more satisfied with their educational experience. Hook (1981) and Tambe (1984) arrived at similar conclusions in their research, especially when the age factor was considered in conjunction with other factors such as race, social characteristics, peer interactions, and familiar variables. In the absence of other intervening or contributing variables, student age contributes little as to the predictability of student attrition and is probably not a primary factor (Gates & Creamer, 1984).

**Academic Ability of the Student**

It is reasonable to conclude that the more academic ability a student has, the better his or her chances are to complete a higher education degree. The traditional measurements of academic ability, especially the grade point average (GPA), the Scholastic Aptitude Test (SAT), American Council on Education Exam (ACE), and the American College Testing (ACT) program, when correlated with attrition rates, generally verify that conclusion. Carney and Geis (1981) found in their study of 490 first semester freshmen at the University of Oklahoma that the composite ACT score had the highest correlation with attrition rates of any of the 23 variables they tested. The majority of the studies that deal with academic ability and attrition support these findings.
Bell (1984) concluded that among four variables which discriminated between persisters and dropouts, the SAT scores, high school class standing and higher education GPA were significant to group separation. Similarly, Dallam and Dawes (1981), Whittmeyer, and Camiscioni, and Purdy (1971), White and Bingham (1982), and Miller and Eddy (1983), all found that students with higher GPAs, higher SAT and ACT scores were much more likely to persist in their academic undertaking.

However, a study carried out at the University of Arkansas by Rownd, Boulton, and Marr (1982) on the likelihood of a student dropping a course versus dropping out of school had statistical results that were mixed, thus lending little support to the hypothesis that students with higher GPAs would drop fewer courses than students with lower GPAs. A few other studies have also reached the conclusion that by themselves, the traditional measures of academic ability were not predictive of student attrition at the college level (Blanchfield, 1971; Huch, Cormier & Bonds, 1974; Johanson & Rossmann, 1970; Rownd, Bolton & Marr, 1981).

Despite the mixed results of these studies, the academic ability of the student, in conjunction with other variables, remains one of the more consistent predictors of attrition (Maudal, Butcher & Mauger, 1974). Most higher education institutions have reached this conclusion also and one of the key elements in several programs to increase retention is
the goal of enrolling students with higher GPAs and standardized test scores (Gardiner & Nazari-Robaji, 1984; Lewis, 1980). In some instances, academic ability seems to be a better predictor of student performance than of persistence in school.

**Personality Attributes and Attrition**

Although studied extensively over the years, investigation into student personality attributes and their corresponding value orientations have given way to other current popular interests. Inconsistent results have plagued this type of research and the same type of difficulties are found in attempting to study personality characteristics of students as were found in studying their motivational characteristics. Nevertheless, some interesting findings have been developed from these studies.

Pascarella (1982) has identified some of the more relevant factors of student personality attributes related to attrition and retention. Assertiveness (to a point), a positive self-concept, self-confidence, moderate autonomy, maturity, and a strong sense of responsibility are conducive to persistence in college. The student's own individual values, as well as his or her intellectual orientation, are only important to persistence to the degree that they are congruent with the values and intellectual orientation of the institution (Pascarella, 1982). A large number of
negative personality attributes have been found among student nonpersisters. Studies have characterized dropouts' personalities to be aloof, critical, disagreeable, immature, impulsive, non-conforming, rebellious, self-centered, and uncooperative (Blanchfield, 1971; Kamens, 1971; Miller & Eddy, 1983). Hostility towards the institution as well as high anxiety levels add to the chances that a student will dropout (Rose, 1980).

As with investigations into other student characteristics, alone, the personality attributes have limited predictive value in relation to college student attrition. These attributes most likely should be included in the analysis of attrition and retention; however, the difficulties in accurate measurement techniques, discrimination of variables, and methodology must be considered.

Background Characteristics Associated with Attrition

Student Race and Attrition

Both the type and the quality of investigations into racial factors related to student attrition have progressed and keep pace with the changes in American society composition and interests. The tremendous increases in minority enrollments during the 1960s and 1970s, particularly among black students, has currently reached a plateau and may be beginning to decline (Sewell & Shaw, 1967). Before the mid-1970s, there were only limited attempts to
study ethnicity and race, more often than not producing equivocal results. A pioneer study by Astin (1973) investigated a wide spectrum of racial types, including Black, Oriental, American Indian, and Jewish students. His findings seem to indicate that without inclusion of other variables, particularly those related to academic ability, the racial factors were not particularly useful in predicting who would remain in school (Astin, 1973).

Two more recent studies concerned with the race and sex of students reached somewhat different conclusions. Avakian, MacKinney, and Allen (1982) concluded that those students who were most likely to drop out were, first, black men, then black women, followed by white men and then white women. Bynum and Thompson (1983) concluded from their findings that minority students of any race (Black, White, American Indian, Hispanic) were more likely to be dropouts than the racial majority of a particular institution. In addition, their findings indicated that the sexual majority (male or female) was also more likely to have a higher percentage of dropouts (Bynum & Thompson, 1983). Although more concerned with improving retention, Faulk and Aitken, (1984) found a very high rate of attrition, ranging from seventy-five to ninety-three percent among American Indian college students. However, their research also indicated that being an American Indian, by itself may not be that significant a factor in attrition. Among American Indians with good high
school preparation, high personal motivation, and adequate financial support, the persistence rates were similar to those found among white students (Paulk & Aitken, 1984). Eddy (1986), after a thorough review of the most current research into minority student attrition problems, concluded that despite the difficulties with minority retention programs, the rates of attrition can be reduced significantly.

At the community college level, McCool (1984) investigated the factors which would be likely to increase Hispanic student retention. Despite the significantly higher rates of attrition among Hispanic students in community colleges, his research implies that the dropout rate can be reduced if the institution develops an integrated approach involving multiple facets of student experience (McCool, 1984).

Due to a variety of factors, including programs such as Affirmative Action, professional schools in the United States have attempted to increase their minority student enrollments. Although overall attrition rates tend to be higher in professional oriented programs, minority students seem to have an even higher tendency to leave these programs (Pascarella, 1979). Brown (1979) indicated that the increasing attrition rates among minority nursing students was directly related to poor academic preparation, feelings of isolation and loneliness, frustration, and disillusionment, not being aware that they need help, lack of knowledge
about support systems and an untrained faculty who were not able to "handle minority student problems" (p.28). Buckley (1980) in a study among forty integrated and predominately black schools of nursing, attempted to improve the retention rates to an exceptionally high eighty-five percent. His conclusions were that the faculty commitment to black student recruitment and retention was deficient and was the major factor contributing to the low (less than eighty-five percent) retention rate at the schools studied (Buckley, 1980). A landmark study conducted by the University of Oklahoma College of Nursing (1981) reinforced the findings that culturally different students, including American Indians, Blacks, males, and career ladder students had experienced higher attrition rates than the prototypic white female nursing students. A retention program was developed to attempt to decrease the rates of attrition among minority students based on similarities in beliefs, attitudes, and personality traits between the minority group and the "mainstream" students (Oklahoma University, 1981).

Rugg's (1982) study of some 3,000 college students at the University of Mississippi over a four-year period produced results that were in direct contradiction to the results of some research concerning minority students. Using a longitudinal tracking method, he found that minority students actually had a higher voluntary retention rate than non-minority students (Rugg, 1982). Similarly, Gates and
Creamer (1984) found that the minority status of students (race and socioeconomic class) was at the bottom of a nine factor ranking of causes for student attrition (p. 47).

Again, the results of the research into racial factors that affect attrition and retention in college and universities must be interpreted with care. Initially, the equivocal results may indicate that race, by itself, is not the basic issue. Although these studies may be considered among people of differing racial and ethnic backgrounds, what they may actually be measuring is a complex of factors associated with the student's socioeconomic status, including parental education, total income, previous education, etc., (Trent & Ruyle, 1965). In addition, the racial composition at a particular institution tends to remain consistent within that institution, thus making studies from a single institution difficult to correlate with other studies and project to other schools.

Financial Factors and Student Attrition

Only a small percentage of the thirty percent of students who never complete a degree after starting school attribute their attrition to financial reasons (McCool, 1984). Lack of money is more strongly related to the "stop-out" phenomenon (Herndon, 1984). Past research into financial status of students indicate that family income had a strong positive correlation with a student's tendency to graduate (Astin,
1973; Eckland, 1965). Recent research into the financial background factor and attrition generally do not treat it as an isolated variable. Rather, it is included with several predictors of student attrition (Herndon, 1984). The financial aid issue will be more thoroughly discussed under the "Institutional Factors" section.

**Educational Level of Parents and Student Attrition**

Closely related to ethnic and financial factors is the issue of the educational level of students' parents. Earlier studies into this factor again produced equivocal results (Chase, 1970; Rownd, Bolton & Marr, 1981). The results of Billson and Terry's (1982) study of "first-generation" students would indicate that there were some significant barriers to the attainment of a higher education degree by this group. They also found that first-generation students tended to be more vulnerable to attrition (Billson & Terry, 1982). While precise results are difficult to distill from this study due to the many intervening variables included in the research design, the authors draw several conclusions. The major factor contributing to the difficulty in attainment of a degree by first-generation students is the relatively long jump from the social status of their parents to a higher education. In addition, first-generation students have fewer resources, less support, and limited positive role modeling from significant others.
(Billson & Terry, 1982). The recommended measures for improvement of retention among first-generation students made by the authors would be useful for all students.

As students increasingly come from second-generation college and university educated parents, this variable will lose its usefulness as a predictor of persistence. Indeed, the more significant factor in relation to parental education level may be how much the parents value an higher education for the students during early childhood (Pascarella, 1983).

Other Student Background Factors Associated with Attrition

A wide variety of variables related to students' background have been studied in relation to attrition rates. These include hometown size, rural versus urban environment, hometown distance from college, small versus large high school, as well as private versus public high school (Astin, 1973; Fishman & Pasanella, 1960; Johanson & Rossmann, 1970). In all of these studies, correlation between the factor studied and student attrition rate was low, even in the few multiple correlated studies conducted. Moreover, no casual relationship can be demonstrated and often the reasoning attempting to explain the relationships was weak to non-existent (Panos & Astin, 1968). Recent research into attrition or retention issues tends to avoid these types of studies due to the ambiguous results they
produce. Even with the advent of computers and the use of powerful multiple correlation statistics, only a small portion of the variance can be explained, thus making attempts at determining predictor variables of attrition relatively inaccurate (Pascarella, 1983).

Institutional Factors Related to Student Attrition

A relatively small number of studies have focused their attention on characteristics and programs found in the educational institutions themselves and how they can affect attrition rates. The major premise of these studies is based on the philosophy that most, if not all students, are capable of achieving a college or university education if the characteristics and resources of the institution are well integrated with the individual's needs (Trent & Ruyle, 1965).

Student Financial Aid and Attrition

Radical shifts in the student financial aid structures, particularly those provided by Federal and State government has spawned research into the effect of financial aid on student retention. Iwai and Churchill's (1982) research indicated that among freshmen in particular, the more financial sources the student had available, the greater his or her chance of staying in school. But they also concluded that persisters in school also had higher motivation levels to seek and find these sources of financial support (Iwai &
Churchill, 1982). Herndon's (1984) results tend to support the content in that financial aid increases student retention. In addition, Herndon's study indicated that student recipients of work-study money who lived in the on-campus residence halls tended to graduate at a greater rate than those students who received loan monies as part of a financial aid package (Herndon, 1984). Jenson (1981) also supports the conclusion that student financial aid has a small, but positive effect on the retention of the recipients.

Yet, specific Federal Grants (Pell, Basic Education Opportunity Grant (BEOG)), by themselves have little effect on the overall retention of students. McCreight and LeMay (1982) did not find any difference in persistence when the different basic grant levels were compared. Again, student motivation and commitment seems to be more important than the actual financial aid provided. Some students with very limited financial sources who have a strong commitment to higher education manage to persist while other students in a similar situation find lack of finances a socially acceptable reason to dropout (Pascarella, 1983).

The reality of the situation is that sources of financial aid are changing. Both the level of governmental funding and the method of delivery of those funds to the students have come under close scrutiny by the President and the Congress (Lewis, 1980). This means not only a decrease in those sources of funding, but also changes in
the way they are distributed. At the same time, many states are finding that their own coffers are depleted and that tuition increases are necessary to maintain institutions of higher education. As it becomes more difficult for students to obtain resources for higher education, many may seek less expensive alternatives (Lewis, 1980).

**Remedial Programs and Student Attrition**

As college and university recruiters plunge ever deeper into the pool of available applicants in order to shore up their enrollments, they are accepting students who are academically less and less qualified (Kramer, 1982). The initial despair by professors over these poorly prepared students has given way to concerns about preparing them for a higher education. Indeed, in the "value-added" method of assessment called for by many of the leaders in higher education, the abilities of the student at the end of his or her higher education are much more important than the capabilities at the beginning (Involvement in Learning, 1984). Remedial education programs at the college and university level are one method for meeting this need.

Reed (1981) found that when student academic deficiencies were discovered early in their educational experience and corrected through remedial programs, their level of confidence increased and so did their persistence. The results of Carney and Geis (1984) study would also indicate that
remedial programs at the higher education level could be important factors in increasing student retention.

Other Institutional Factors Related to Attrition

Research studies have probed a number of institutional characteristics which might logically be expected to influence student attrition. Some of these characteristics have a stronger correlation to attrition than others. Much of the research into this area tends to be over simplified and lacks controls for variables other than the particular one being considered (Trent & Ruyle, 1965).

Type and size of the institution have an influence on attrition rates. Two-year colleges tend to have a higher attrition rate than four-year colleges (McCreight & LeMay, 1982; Pascarella & Trenzini, 1979). Also, the more prestige an institution has, the stronger its religious affiliation, the more selective its recruitment procedures, and the more clearly defined its institutional mission, the higher the retention rates tend to be (McCreight & LeMay, 1982; Pascarella & Trenzini, 1979, Trent & Ruyle, 1965).

Stronger and better developed student service programs (including orientation programs, counseling, student health centers, learning centers, and residential life programs) also seem to decrease attrition rates (Blanchfield, 1971; Kramer, 1982; McCreight & LeMay, 1982; Ramist, 1981).

Institutional environment seems to be an important ele-
ment in student retention. Yet, outside of some generalized conclusions about the large-scale characteristics of the effects of schools upon retention, the usefulness of predicting the persistence of an individual student based on institutional characteristics is unclear (Trent & Ruyle, 1965). It may be more significant to study what type of students are attracted to particular types of institutions and why. Also, with the increasing numbers of non-traditional students at all types of higher education institutions, much of the previous research into institutional characteristics and retention needs to be reevaluated.

Models and Theories of Attrition or Retention

In order to understand and influence a multidimensional and complicated process such as student attrition and retention, development of a theoretical framework, or model, is essential (Rossman & Kirk, 1970). Despite the existence of a large body of literature on the attrition or retention problem, there have been relatively few attempts to develop comprehensive models of student adjustment that includes the underlying structural relationships of the process (Atiken, 1982). Of the few theoretical models developed, even fewer have been tested in the higher education setting. Model development in student attrition or retention has shown progression from the earlier, more simplistic person-environmental models to the more complex institutionally
oriented models involving multivariate analysis of the social processes and interaction effects of different factors.

One of the earliest attempts at an attrition model development was by Spady in 1971. Using data gathered in 1965 on some 683 freshmen students, Spady proposed to explain the undergraduate attrition process through longitudinal study and analysis of a variety of variables in both their separate components and interrelationships (Spady, 1971). The model analyzed nine variables, including family background, narrative congruence, academic potential, friendship support, intellectual development, grade performance, social integration, satisfaction, and institutional commitment (Statman, 1982). In the process of the study, Spady revised his model to be more reflective of the actual process in student attrition. The results of his study and model suggest that modification of both intrinsic and extrinsic reward structures of the institution would have the most benefit to increasing retention (Statmen, 1982). Even with this extremely complicated model, he was only able to explain a maximum of .37 variance in freshman persistence (Provost, 1982).

While Tinto's Model (1975) paralleled Spady's in its complexity and consideration of a variety of potentially important relationships between and within sets of variables, Tinto was much more concerned with the statistical interactions while Spady focused more on the measures of social
and academic interactions. Tinto based his model on the theory of cost-benefit analysis (Durkheim's theory of suicide) which proposes to explain any individual decision in relationship to any form of activity in terms of the perceived costs and benefits of that activity and its alternative. Commitment plays an important role in this model since commitment is a reflection of a person's social and academic integration into an institution (Tinto, 1975). These three elements (commitment, academic systems, and social systems) are the organizational poles for the Tinto Model. He analyzes thirteen variables which are to be considered in the final dropout decision of a student. These variables include family background, individual attributes, pre-college schooling, goal commitment, institutional commitment, peer group interactions, faculty interactions, and academic integration (Tinto, 1975). As a longitudinal process of interactions between the individual and the academic and social systems of the college while the individual is at that institution, the dropout decision is based on a range of expectations and fulfillments.

Although Tinto never tested his own model, it was tested by Getzlaf, Sedlacek, Kearney, and Blackwell (1984) at Washington State University among 237 former students. While this study operationalized only five out of seven of Tinto's constructs, the authors concluded that it was useful as an empirical and conceptual framework for studying attrition.
(Getzalaf, Sedlacek, Kearney & Blackwell, 1984). In addition, when other variables are controlled for, individual attributes, past educational experiences, institutional commitment, and academic integration were found to be significant. Those students with lower academic ability, lower academic performance, poor social integration and low goal commitment drop out at a higher rate (Getzalaf, Sedlacek, Kearney, & Blackwell, 1984).

Bean (1980) developed a third model based on findings on turnover in work organizations and on student attrition. As an adaption of a model developed to explain turnover in work organizations, Bean's casual model considers the dependent variable (dropout), the intervening variables (satisfaction and institutional commitment), the organizational determinants, and the background variables (Bean, 1980). Having tested the model himself, Bean concluded that the model was useful in analyzing the process of student attrition. More specific findings indicated that men and women leave school for different reasons and that opportunity variables are important (Bean, 1980). While the model is extensive and complex, it could only account for approximately twenty percent of the variance for women and ten percent for men (Bean, 1980).

More recent development and refinement of the Bean Model have produced what he calls a "Path Model" (Bean, 1980). In this particular model, Bean moves away from the concep-
tualizations of work-turnover foundations of his previous model. While he calls this a casual model also, he eliminates the background variables as well as 13 other variables considered to be spurious (Bean, 1982). The results of testing this model produced a ranking of the ten remaining independent variables from the most influential to the least influential in attrition (intent to leave, grades, opportunity to transfer, practical value, certainty of choice, loyalty, family approval, courses, student goals, major, and job certainty) (Bean, 1982). He feels that this model is of substantial value in understanding the dropout process. This model accounted for 35 to 40 percent of the variance found in groups tested (Bean, 1982).

A third refinement by Bean (1985) has produced an "Explanatory Model of College Student Dropout Syndrome" (p. 345). The assumption that the socialization and selection process influence all and any of the other variables considered provides the theoretical underpinnings for this model (Bean, 1984). Bean concluded that this particular model was "relatively stable across grade levels and accounts for a fair share of the variance in dropout syndrome" (p. 48). Other conclusions reached in the application of this model are that social life of students, as well as peer influence, have a greater effect on a student's dropout decision than do faculty members. This was particularly significant in large institutions where faculty-
student contact was low (Bean, 1985).

Subsequent models and theories of attrition which share Bean's theoretical constructs are those presented by Taylor and Whetstone (1983) and Lewis, Leach, and Lutz (1983). Based on the "college-fit theory" which contends that the greater similarity between the values, goals, and attitude of the student and those of the institution, the more likely the students are to remain in school. Taylor and Whetstone (1983) developed a framework which they felt would identify students who would drop out. Since personal values, attitudes, and goals where the characteristics that the authors hypothesized would most clearly indicate congruence with the institutional values, attitudes and goals, they measured these characteristics of some sixty-five engineering students, matched on cumulative grade point average. They concluded that the college-fit theory was substantiated by their results and that the personal characteristics of students who persisted were different from those who dropped out (Taylor & Whetstone, 1983).

The "Marketing Model for Student Retention" developed by Lewis, Leach, and Lutz (1983) as well as a model advocated by Gardiner and Nazari-Robaji (1981) are also based on a college-fit concept. The underlying thesis that "colleges do not exist to retain students, but rather to provide programs and services which meet student needs" is a direct outgrowth of the basic concepts of marketing (Lewis, Leach &
Lutz, 1981, p. 17). Although untested, the authors felt that these models demonstrated that the marketing process can improve student retention and that it can assist student personnel administrators, faculty and staff to develop cost-effective approaches for improving student retention (Lewis, Leach, & Lutz, 1981).

The "Motivation-Retention Model" developed by Catalano (1985), includes elements of college-fit theory and cost-benefit analysis, but is more comprehensive in its scope and proactive in its orientation. Based on the positive view of the "needs perception as motivation" school of thought, this model considers the importance of "perception" of a need as well as actual needs. When an institution is able to meet the perceived needs of students, the students are drawn towards that institution and persistence (a centripetal force). When the student needs are better met by elements outside the college, they are pulled away from the college toward dropout status (a centrifugal force) (Catalano, 1985). The basic identified needs from previous literature are grouped and listed in this model. This model reverses the usual focus of who will drop out, found in much of the literature, to a more positive orientation of how to keep college students in college (Catalano, 1985).

Several purely mathematical models have been developed in an attempt to predict who will be likely attrition
statistics. Statman (1982) describes the process of all theoretical modeling as one of trial and error. He feels that his mathematical model, based on "catastrophe theory" more accurately identifies the limited number of crucial variables to be considered in attrition research (Statman, 1982). He applies his model to attrition problems identified in the literature, including committee behavior, teacher ability, institutional vitality, funding, et al. (Statman, 1982). He concludes that this model stands a better chance of reflecting reality than other models dependent upon interrelationships of variables (Statman, 1982).

In contrast, Aitken (1982) developed a structural model which analyzed a number of variables and their interactions through four equations. Based on the belief that student's decision to remain at a specific university or college is directly determined by the important aspects of his experience, Aitken includes variables from student life and experience as well as the physical environment and quality of service in his multi-equation model. He concluded that his model could differentiate between variables that have a direct effect on retention and variables that effect retention only indirectly (Aitken, 1982.)

Rownd, Bolton and Marr (1981) in their test of four theoretically derived hypothesis or propositions concluded
that laboratory research on attrition was not transferable to actual student behavior. The authors contested that the mathematical models used needed to include more of the relevant situational and personal variables (Rownd, Bolton, & Marr, 1981).

The systems approach formed the basis for the Retention Model developed at the University of Oklahoma (1981) to increase recruitment and retention of minority nursing students. This complex model which included the elements of curriculum, faculty organization, support groups, students, community, college of nursing, and others, was implemented through involvement of the faculty, students, support staff, and college administration. Specific retention activities fell within three categories: individual and group support, tutorial assistance, and administrative approaches. The research results indicated that a concentrated effort to bring culturally different students into the mainstream belief, attitudes, and personality traits of the majority nursing students will have a positive effect on the retention rates. In addition, a need to accept and maintain the cultural differences was also indicated. A change in the attitudes of the faculty in general, to value the worth of each student was vital to this model's success (University of Oklahoma, 1981.)

A model developed and tested by Gepner (1981) at Rutgers University used the Identification of Potential Dropout
Questionnaire (IPDQ) to predict the community college students with the highest attrition potential. This model paralleled, to some degree, the process used in Tinto's model except that the author was able to reduce the variables analyzed to six (Gepner, 1981). When applied to the actual attrition rates of the school, this model was able to predict seventy-seven percent of the students who eventually did drop out (Gepner, 1981).

Not only has the theoretical development of models for attrition and retention been haltingly slow, it has also been disparate and inconsistent. The major weakness in the majority of these models is the lack of consistent definition of variables. Without the ability to determine directional causality, much of the statistical results obtained are meaningless (Bean, 1980). Another deficiency of many of these models is their negative approach (focus on attrition) and reactive, ex post facto orientation. While being able to predict who will drop out is an important element, in order to be successful, models need to be oriented toward keeping students in school (Catalano, 1985). The models also need to be operationalized and tested on a wide scale basis. Many were not tested at all, and among the ones that were tested, the generalization of the results were limited due to small sampling size and single institutional testing.
Successful Student Retention Programs

Given the considerable amount of research into attrition and retention of college and university students, is there any evidence that this information can be used to influence these problems? The answer may well be a qualified "yes." This particular aspect of the literature on attrition and retention is the least developed. Most of the research completed tests only one or two elements at a time of what might be considered a comprehensive retention program. Nevertheless, when considered collectively, the results would seem to indicate that retention of students can be increased.

Advisement of students, both academic and personal, seems to be an important part of a successful retention program. Habley (1981) contends that academic advisement is the cornerstone of successful student retention. Defined as "providing assistance in the mediation of dissonance between student expectations and actualities of the educational environment," academic advisement, in order to be successful, must be developmentally active (Habley, 1981, p. 46). From these assumptions, Habley develops what he calls the "Advisement-Retention Model." Although untested, he feels that there is a critical relationship between academic advisement and student retention since it provides the most significant mechanism through which students are able to align their expectations with the realities of the
environment (Habley, 1981).

Glennen and Baxley (1985) advocated an advisement system that students are required to utilize. This "intrusive advisement" was viewed as one method to overcome the tendency freshmen students at New Mexico University displayed to avoid seeking voluntary assistance. The retention program also included testing, developmental education, and more vertical degree options aimed at entering freshmen (Glennen & Baxley, 1985). The results over a two-year period (1982-1984) indicated that the program was successful. The retention rate was improved from thirty-five percent to seventy-five percent for entering freshmen, including a twenty-seven percent increase for students with low ACT scores (Glennen & Baxley, 1985).

Another element which is viewed as critical to successful retention programs is remedial or supplemental instruction. Blanc, DeBuhr, and Martin (1983) tested an academic support program found to be effective in aiding students with poor academic performance. Naming their program "Supplemental Instruction" (SI), it emphasized identification of high-risk courses rather than high-risk students, and directed the supplemental programs to these identified courses (Blanc, DeBuhr, & Martin, 1981). Reasoning and thinking skills were stressed during the SI sessions. The authors concluded that the data collected and analyzed on some 746 students represents a radical change in the achievement patterns
exhibited by high-risk students. The retention rates increased thirteen percent during the first four years the program was in effect (Blank, DeBuhr, & Martin, 1981).

A research project undertaken by Granger (1982) attempted to increase the retention rate at the Wichita Practical Nursing School through the use of a voluntary student skills workshop. While the overall results were statistically equivocal in regards to an improved retention rate, fewer students who attended the workshop failed academically. The results confirm the position that leaving college is a multidimensional process, including academic factors.

Hossler (1981) studied the effect of organized student life programs as one method of increasing student retention. Conducted among California's seventy-three universities and colleges, the results indicated that almost all were concerned with increasing retention. Yet, only twenty-five percent of the schools had any type of "resident life programs."

Similarly, Smith, Lippitt, Noel, and Sprandell (1981) concluded that strong residential life programs are an important aspect of comprehensive "Quality of Life Model" which may help in increasing student retention. In addition, the authors recognize the need for broad-based administrative and management support in order to maintain a high quality. While recognizing the individual needs of
each campus, they suggest target areas for improvement. These areas include academic stimulation and assistance, improved academic advising, faculty awareness, improved orientation, and career assistance programs, among others (Smith, Lippitt, Noel, & Sprandel, 1981). The above listed activities are seen to increase the quality of the interactions, and therefore, increase retention (Smith, Lippitt, Noel, & Sprandel, 1981).

Hudepohl and Reed (1984) developed a retention program for high-risk nursing students at the University of Texas, San Antonio. This program involved identification of high-risk students, a faculty orientation, and development of an advisement program (Hudepohl & Reed, 1984). Early results indicated some success at increasing the retention rates of these high-risk students, but further testing over a longer period of time is required (Hudepohl & Reed, 1984).

In an attempt to assess the effect of retention programs on a broader scale, Boyd, Magoon, and Leonard (1981) developed a "step-wise plan of evaluation" (p. 290). This plan involved combining various student sub-groups with retention interventions thereby indicating which interventions were most effective. The range of possible interventions is potentially very wide. The essential tasks in the process included identification of target groups of students and developing and designing interventions likely to decrease attrition (Boyd, Magoon, Leonard, 1981). The authors
contend that it is irresponsible for institutions of higher education to accept past and present attrition rates as inevitable. Rather, the small-sample approach they advocated is perceived as a method for administrators and counselors to increase the retention rates (Boyd, Magoon, Leonard, 1981).

A milestone report by Beal and Noel (1982) that reverses the focus of student attrition/retention research from the negative to the positive, evaluated over 800 returns from two- and four-year colleges. The report focuses on tractable variables and suggests a large number of activities and actions on college and university campuses which have the potential of increasing retention (Beal & Noel, 1982). The programs with the highest success rates were those emphasizing freshmen orientation, educational skills, academic support services, advisement, and counseling. The weakness of this otherwise perceptive report lies in the lack of empirical data to support the success of these programs (Beal & Noel, 1982). Nonetheless, when taken in conjunction with the Ramist (1981) report, it is possible to synthesize a comprehensive list of the potentially most successful activities that institutions of higher education can undertake to improve retention (Ramist, 1981).

Summary Evaluation of Attrition and Retention Literature

It is evident from the volume of available literature that the issues of student attrition and retention are areas
of major concern in higher education. While this review is not totally comprehensive, the major and representative research on the subject has been included and evaluated. With the exception of a few papers, the vast majority of the research focuses on the negative, i.e., why students leave school rather than how they can be encouraged to stay. It is also very difficult to obtain a broad overview of the current state of student retention in the American Higher Education system due to the myopic and narrow focus of much of the research. Outside of the efforts by Noel and Beal, no other attempt has been undertaken to evaluate the effectiveness of retention programs on a nation-wide basis. There is no indication that any effort has been made to assess the success of retention programs at Baccalaureate Degree Nursing Programs. This present study attempts to fill that void in the research.

This present study is advantageous to higher education administrators at all levels, chairpersons of Baccalaureate Degree Nursing Programs and the faculty of these programs who are concerned with keeping qualified students in their programs. This study provides an inclusive overview of retention programs throughout the United States, and dictates which aspects of retention programs are most successful. In an era of shrinking financial resources, it behooves administrators of colleges and universities to use those resources where they are most productive.
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CHAPTER III

PROCEDURES OF THE STUDY

Introduction

This section will consist of information about (a) population, (b) sampling method, (c) instrument, (d) procedures for collection of data, and (e) procedures for data analysis.

Population of the Study

The target population of this study was the National League for Nursing accredited, Registered Nurse Baccalaureate Degree programs in the United States. This population consists of 430 Baccalaureate degree nursing programs located on the campuses of institutions of higher education of varying size throughout the United States. This population was chosen because maintenance of enrollment in these programs through increased retention efforts is or will be essential for their survival. In addition, the National League for Nursing publishes an annual updated list of all the Baccalaureate degree nursing schools in the United States with current enrollments and a number of students graduated (Baccalaureate Education for Nurses, 1986.)

The survey instrument was directed to the chief administrator (chairperson, dean, director) of the particular nursing program. This individual will have ready
access to the requested information concerning both the number of students and graduates in their program as well as knowledge of retention efforts at their institution. Also, the administrators of these program have a commitment and concern to maintain or increase enrollment.

Sampling Methods

No sampling method, in the strict sense, was used since the entire target population was queried. The questionnaire was sent to all the programs listed in the National League for Nursing publication with the exception of those programs chosen for the pilot study.

While a 100 percent response rate was the ideal, a representative response rate of 50 percent (215) was accepted. Non-respondents were to be followed-up by letters of reminders two times (Appendices C and D).

Development of the Survey Instrument

After reviewing the literature and examining the studies conducted by Beal and Noel (1982) and Ramist (1981) concerning successful aspects of retention programs, a questionnaire was developed through content analysis of these authors most recent publications, to elicit information related to the presence of retention programs on a particular campus and the specific rates of retention for that campus.

This voluntary, self-administered questionnaire contains
thirteen major closed questions with sub-divisions under the last six questions. Space is provided for additional information (Appendix A). Section I (questions one through six) elicit information relevant to the particular programs size, graduation rate, and retention rate, as well as the perceived need to increase retention. Section II (questions A through F) seeks information concerning the actual presence of an organized and functioning retention program on that campus and consideration of what has been identified as significant aspects of successful retention programs at other institutions of higher education. The questionnaire required approximately fifteen minutes to complete.

The content validity of the questionnaire, as defined by Borg and Gall (1979, p. 212), was judged by a panel of ten authorities in Nursing, Nursing Education, Higher Education, and Educational Psychology. They were requested to examine each item of the questionnaire as to relevance to the study, comprehensibility by the respondent, and general construct validity. Each of the items identified by the majority of the panel as successfully meeting the criteria was retained in the instrument. Items which did not meet the criteria were rejected and eliminated from the instrument.

The reliability of the validated instrument was assessed by means of a pilot study conducted during the early part of the Spring, 1987 semester at the eight Baccalaureate Degree Nursing programs in Oklahoma. These particular schools were
chosen due to their proximity and similarity in distribution and size of programs to those found across the United States in general.

The test-retest method was used in validating this instrument. Two weeks after receipt of seven of the eight completed questionnaires by the researcher, the respondents were requested to complete the same instruments again in order to ascertain whether any significant differences appeared between the first and second responses to the questionnaire items. The Equal Length Spearman-Brown procedure was used to estimate the reliability of the total instrument (Fox, 1982). The generally accepted reliability standard of .80 was used in acceptance of this instrument (Fox, 1982). An actual reliability of .89 was obtained.

The pilot study also provided information about the ease of use and the accuracy of the information collected. Based upon the results of this pilot study, minor revisions of the instrument were made, including clarification of instructions.

The information gathered from the Oklahoma schools was included in the final results. The data from the first questionnaire was included in the final analysis of all of the data.

Data Collection Procedures

The instrument was distributed to the 430 Baccalaureate
degree, NLN accredited nursing programs in the United States during the Spring 1987 semester. A cover letter (Appendix B) describing the potential value of the study and purpose of the questionnaire was attached to the questionnaire. A postage-paid, self-addressed envelope addressed to the investigator was included with each questionnaire. If a fifty percent response rate was not obtained from the first mailing, then follow-up reminder letters were to be sent to the non-respondents two weeks later (Appendix C). If after another two week period, a fifty percent response rate was still not obtained, another follow-up letter with a copy of the questionnaire was to be sent to the non-respondents (Appendix D).

In actuality, the first mailing produced a return rate of 61.2 percent (N-263); therefore, the second and third follow-up mailings were not required. Of the returned questionnaires, 56.5 percent were sufficiently completed as to be useable in the data analysis of this study. The twenty questionnaires returned that were not used in the study were either left totally blank or had written comments only on them.

Data Analysis Procedures

Data from the test instruments was hand-scored by the researcher and cross checked by a statistical computer program, Statistix. A mean percentage for each of the three
groups (institutional level retention programs, departmental level retention programs, no retention programs) was determined. These were reported in simple percentages in answer to hypotheses number one, two, and three (Fox, 1982; Borg & Gall, 1979).

Hypotheses four, five, and six were tested by a two-tailed t-Test for independent groups and one-way analysis of variance (ANOVA) which is useful for testing more than one group in terms of the mean score (Huck, Cormier, & Bounds, 1974). Significance in differences between the means were tested at the .05 level (t-Test and F Value). If there was a significant value for the ANOVA, then a Tukey HDS would have been used. Since the results were not significant statistically, a power analysis (ES) was conducted to determine the possibility of a type II error (Burns & Grove, 1987.)

The additional data gained from the instrument concerning particular aspects and types of programs to increase retention rates were reported descriptively. This analysis study were either left totally blank or had written comments only on them.

Data Analysis Procedures

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level retention programs, no retention programs) was determined. These were reported in simple percentages in answer to hypotheses number one, two, and three (Fox, 1982; Borg & Gall, 1979).

Hypotheses four, five, and six were tested by a two-tailed t-test for independent groups and one-way analysis of variance (ANOVA) which is useful for testing more than one group in terms of the mean score (Huck, Cormier, & Bounds, 1974). Significance in differences between the means were tested at the .05 level (t-test and F value). If there was a significant value for the ANOVA, then a Tukey HDS would have been used. Since the results were not significant statistically, a power analysis (ES) was conducted to determine the possibility of a type II error (Burns & Grove, 1987.)

The additional data gained from the instrument concerning particular aspects and types of programs to increase retention rates were reported descriptively. This analysis includes frequency counts, percentages, and ranking. These data are also presented in table form (Appendix F).

Summary

The population of the study and the process of development for the original survey instrument has been described in Chapter III. Details of the data analysis will be presented in Chapter IV.
CHAPTER BIBLIOGRAPHY


CHAPTER IV
PRESENTATION AND ANALYSIS OF DATA

The data presented in this chapter are the result of a survey to determine the status of specific student retention efforts at the departmental and university levels in institutions of higher education offering baccalaureate degrees in nursing. The data resulted from a survey questionnaire, the items of which were designed to provide answers to the six hypotheses presented in Chapter I.

During the Spring semester of 1987, 430 questionnaires were mailed to the chief administrators (dean, director, department chairperson) of baccalaureate degree granting nursing programs located on college or university campuses of varying size throughout the United States. The population included all those institutions which were accredited by the National League for Nursing (NLN). Data collection was terminated with a 61.2 percent return rate from the population.

Statistical Analysis of the Data

Statistical analysis was initially conducted by hand and cross checked by a computer-generated statistical program, Statistix, leading to the construction of the statistical presentations for this study. In addition to three statistical tables, six frequency response and percentage
Graduates from Baccalaureate Degree Nursing Programs

Respondents to the questionnaire were first asked to indicate what percentage of their students enrolled as nursing majors in 1983 graduated in the Spring semester of 1987. According to this data, an overall retention rate of 63.76 percent was compiled for all of the responding programs, regardless of the presence or absence of retention efforts. The responses ranged from a low of six percent to a high of 100 percent retention rates.

The next question sought data concerning the perceived need for retention efforts to help increase student retention. Seventy-six percent of the respondents felt that there was a need to increase retention efforts while twenty-four percent felt that there was no need for such efforts.

Presence of Retention Programs

Responses to the questions concerning the presence of organized retention programs at the Departmental and University levels are summarized in Table 1. It should be noted that in all cases where respondents indicated an organized retention program, they also indicated that it was functioning at the time. Along with the division of the
Table 1
Summary of Data from Baccalaureate Nursing Programs With and Without Student Retention Programs

<table>
<thead>
<tr>
<th>Type of Retention Program</th>
<th>N</th>
<th>Percent of Total N*</th>
<th>Range of Retention Rate in %</th>
<th>Retention Rate in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department Level Program Only</td>
<td>7</td>
<td>17</td>
<td>25-100</td>
<td>70.75</td>
</tr>
<tr>
<td>University Level Program Only</td>
<td>55</td>
<td>23</td>
<td>17-100</td>
<td>70.77</td>
</tr>
<tr>
<td>Both University and Department Level Retention Programs</td>
<td>63</td>
<td>26</td>
<td>6-100</td>
<td>72.47</td>
</tr>
<tr>
<td>Total With Programs of Either Type</td>
<td>135</td>
<td>56</td>
<td>6-100</td>
<td>71.33</td>
</tr>
<tr>
<td>No Retention Programs</td>
<td>108</td>
<td>44</td>
<td>10-100</td>
<td>56.19</td>
</tr>
</tbody>
</table>

* Total N = 243
groups by percentages, the retention rates and range of responses for each group are also provided.

Means and standard deviations of the various groups were computed. Differences of the mean retention rate between the "No Retention Program" group and the groups with retention programs were analyzed by a two-tailed t-test for independent samples. The results are summarized in Table 2. They indicate that there is a significant difference at the .05 between those Baccalaureate Degree Nursing programs with some type of organized student retention program and those without organized student retention programs.

Since the results of the t-test indicate a significant difference between the "No Retention Program" group and the other three groups with retention programs, a one-way analysis of variance (ANOVA) was computed between the means of the "Departmental level retention program only" group, the "University level retention program" only group and the "Both departmental and university level program" group. These results are presented in Table 3. The results of the ANOVA revealed no statistical difference among these three groups.

Since there was no statistically significant difference among these three groups, the Tukey HDS test was not required. But a power analysis test was performed on the results to determine the power of the ANOVA to detect a significant difference. An Effect Size (ES) of 0.188 was
Table 2
Retention Rates for Baccalaureate Degree Nursing Programs According to Presence of Retention Program By t-Test

<table>
<thead>
<tr>
<th>RETENTION PROGRAM</th>
<th>X</th>
<th>SD</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Retention Program</td>
<td>56.19</td>
<td>31</td>
<td>3.97*</td>
<td>123</td>
</tr>
<tr>
<td>Department Level Only</td>
<td>70.75</td>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Retention Program</td>
<td>56.19</td>
<td>31</td>
<td>4.66*</td>
<td>161</td>
</tr>
<tr>
<td>University Level Only</td>
<td>70.77</td>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Retention Program</td>
<td>56.19</td>
<td>31</td>
<td>4.56*</td>
<td>169</td>
</tr>
<tr>
<td>Both University and Department Level</td>
<td>72.47</td>
<td>26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Retention Program</td>
<td>56.19</td>
<td>31</td>
<td>5.88*</td>
<td>241</td>
</tr>
<tr>
<td>All Groups With Programs</td>
<td>71.33</td>
<td>25</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Significant at the .05 level
calculated indicating that the risk of a Type II error from this particular ANOVA was less than two out of one-hundred (Burns & Grove, 1987).

Table 3
Analysis of Variance of Mean Retention Percentages for the Three Groups of Baccalaureate Degree Nursing Programs With Student Retention Programs

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Sums of Squares</th>
<th>df</th>
<th>$\bar{X}$</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Treatment (SST)</td>
<td>1,890,796</td>
<td>2</td>
<td>945,398</td>
<td>1.81*</td>
</tr>
<tr>
<td>Within Treatment (SSE)</td>
<td>53,700,058</td>
<td>103</td>
<td>521,360</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>55,590,854</td>
<td>105</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*3.95 Required value for significance at the .05 level

Individual Retention Activities
Section II of the Baccalaureate Degree Nursing Retention Program Questionnaire was completed only by those responding positively to question three and or question five on Section I of the questionnaire. These data are comprised of those respondents who had indicated that there was a functioning student retention program at the departmental level, at the
university level or at both levels. In order to further distinguish between those elements of the indicated programs which were most successful and those that were least successful, the data from the questionnaires were analyzed based upon the mean retention percentages which were one standard deviation and more above the group mean as compared with those results which were one standard deviation and more below the group mean. A rank ordering was then calculated for each of the individual retention activities of the subgroups found in Section II of the questionnaire. This data is placed in Appendix F (Table 4, Table 5, Table 6, Table 7, Table 8, and Table 9). A discussion of these data follows.

**Area A. Orientation Programs**—These types of programs are found more frequently at the university level. The elements of orientation programs which are most successful are: "Special orientation for transfer students," and "Summer orientation for all new students." The element which has the least success is: "Pre-testing for placement and identification of high-risk students."

**Area B. Supplemental Instruction Programs**—Use of a "Learning laboratory" and "Early notification of failing grades" were the two activities which met with the most success in this area of retention activities. Almost as highly ranked were "Study skills programs" and "Individual tutoring." There was no clear indication of which
activities were least successful from the below one standard deviation group.

Area C. Counseling and Advising—While "Mandatory student advisement before each registration period" and a "Referral system to campus resources and services" ranked high on the activities in Area C, the large number of tied ranks make decisions about the successfulness of individual retention activities uncertain.

Area D. Student-Faculty Interaction—Both the high retention rate group and the low retention rate group ranked "Special activities to promote faculty-student interaction" and "Mandatory faculty office hours" first and second respectively. This area received, overall, the lowest number of responses from all groups.

Area E. Peer Interaction and Campus Involvement—The retention activities of Area E were found more frequently at the university level. "Identification and assemblage of students with common interests" and "Minority student organizations" were the activities that ranked highest in the most successful groups. "On-campus part-time work-study programs" was the activity which was found most frequently among the low retention rate groups.

Area F. Administrative Activities—These activities were most commonly conducted at the university level also. The activities which received the highest ranking among the respondents with the highest retention rates were "Exit
interviews with students who withdraw from college" and "Follow-up studies of students who withdraw from college." There was no clear indication by rank of an activity in this area which was common among the lower retention rate respondents.

The open-ended responses (Appendix E) did not provide any additional significant data for the study. In general, these responses consisted of specific examples of retention activities or repeated activities found elsewhere in the questionnaire.

Responses to Research Hypotheses

In the following subsections, answers are provided to the hypotheses presented in Chapter I to carry out the purposes of this study. Data are included, where applicable, from the previous analysis of data by questionnaire item.

Hypothesis One

Hypothesis one states, "The majority of the surveyed institutions of higher education with NLN accredited Baccalaureate degree nursing programs will not have specific programs in place and functioning at the institutional level." The data indicate that 118 of the surveyed institutions that responded to the questionnaire had specific programs in place and functioning at the institutional (university) level. This number is 48.5 percent of the total N of 243. Hypothesis one is retained but only by a
Hypothesis Two

Hypothesis two states, "The percentage of surveyed institutions of higher education with baccalaureate degree nursing programs that have specific retention programs in place and functioning at the departmental or divisional level will be less than those institutions that have programs at the institutional (university) level." The data indicate that eighty of the surveyed institutions that responded had specific programs to increase student retention in place and functioning at the departmental or divisional level. This number is thirty-three percent of the total N of 243 and 16.5 percent less than those institutions with programs at the university level. Hypothesis two is retained.

Hypothesis Three

Hypothesis three states, "The majority of the surveyed institutions of higher education with NLN accredited Baccalaureate degree nursing programs will not have specific programs to increase student retention in place and functioning at the departmental or divisional level." The data indicate that 163 of the surveyed institutions that responded to the questionnaire did not have specific programs in place and functioning at the departmental or divisional level to increase student retention.

This number represents sixty-seven percent of the
total N of 243 which is a majority. Hypothesis three is retained.

Hypothesis Four

Hypothesis four states, "The retention rates for nursing students in those NLN accredited Baccalaureate degree nursing programs that have specific programs in place and functioning to increase student retention, at the institutional level, will be significantly higher than the rates of nursing programs which do not have any retention programs." The data indicated a mean retention rate of 70.77 percent for those survey respondents with university level programs to increase student retention as compared with a mean retention rate of 56.19 percent for those respondents without such programs. Statistical analysis of these two means by a two-tailed t-test for independent samples produced a statistically significant difference at the .05 level (t=4.66, df=161). Hypothesis four is retained.

Hypothesis Five

Hypothesis five states, "The retention rate for nursing students in those NLN accredited baccalaureate degree nursing programs that have specific programs in place and functioning, at the departmental or divisional level, to increase student retention will be significantly higher than the rates of nursing programs that do not have any retention programs." The data indicate a mean retention rate of 70.75
percent for those surveyed respondents with departmental or divisional level programs to increase student retention. This compares with a mean retention rate of 56.19 percent for those respondent institutions without programs to increase student retention. Analysis of these two means by a two-tailed t-test for independent samples produced a statistically significant difference at the .05 level ($t=3.97$, $df=123$). Hypothesis five is retained.

**Hypothesis Six**

Hypothesis six states, "The retention rates of nursing students in those baccalaureate degree nursing programs that have specific programs in place and functioning to increase student retention at the institutional (university) level will not be significantly different from the rates of nursing programs at the departmental or divisional level." The data indicate a mean retention rate of 70.77 percent for those survey respondents with institutional (university) level programs to increase student retention as compared with a mean retention rate of 70.75 percent for those respondents with departmental or divisional level programs. Analysis of these two means along with the mean retention rate of 72.47 percent for respondents who indicated both institutional (university) level and departmental or divisional level programs to increase student retention by a one-way analysis of variance (ANOVA) produced no
statistically significant difference at the .05 level \((F=1.81, \text{ df SST}=2, \text{ df SSE}=103)\). In accepting the null hypothesis, a power analysis was conducted which resulted in a ninety-eight percent or better confidence level that the results were accurate \((ES=.188, \text{ df}=2, 35)\). Hypothesis six is retained.

Additional Information from Questionnaire Section II

In order to determine which elements of the various retention activities were found in the institutions which had the highest retention rates, the data contained in Section II of the survey questionnaire were hand tabulated into frequency counts, percentages and ranks. It was decided that the most successful retention efforts would be found in that group of respondent nursing programs which had retention rates one standard deviation or more above the mean retention rate for that group. Likewise, those nursing programs with the least successful retention efforts would be found in that group of respondent nursing programs which had retention rates one standard deviation or more below the mean retention rate for that group.

Among the six main areas of retention activities listed on the survey questionnaire, the most successful, by percentage, for departmental or divisional level retention efforts was Area B, Supplemental Instruction Programs, while the least successful was Area D, Student-Faculty Interactions.
For those respondents that indicated that they had organized retention efforts at only the institutional or university level, Area D, Student-Faculty Interactions, and Area F, Administrative Activities, had the highest percentage of success, while Area E, Peer Interaction and Campus involvement met with the least success. Among those respondents that indicated both departmental or divisional and institutional or university level retention efforts, Area A, Orientation Programs, Area C, Counseling and Advising, and Area F, Administrative Activities, were most successful while Area E, Peer Interaction and Campus involvement had the lowest percentage of success. When the three groups are considered together, only Area F, Administrative Activities, showed a higher success rate by a very slim margin.
CHAPTER BIBLIOGRAPHY

CHAPTER V

SUMMARY, DISCUSSION OF DATA FINDINGS, CONCLUSIONS
AND RECOMMENDATIONS

Summary

This study is concerned with the problem of determining what the status is of specific student retention efforts at the departmental and university levels in institutions of higher education offering baccalaureate degrees in nursing. The purposes include determination of the percentages of these institutions which have specific programs to increase student retention in place and functioning at the various administrative levels, as well as the determination of those aspects of the many possible retention efforts that are being utilized and identification of those retention efforts that are most effective. In addition, this study proposes to compare nursing student retention rates of those institutions with organized student retention programs and those without such programs. It is hoped that a determination of those current retention efforts that are most successful will help provide impetus for the development of student retention programs as well as guidance about what particular aspects of programs might be most valuable for the expenditure of limited resources.
Population of the Study

The population of the study is composed of all the National League for Nursing (NLN) accredited, Registered Nurse Baccalaureate Degree granting programs in the United States. This population consists of 430 Baccalaureate degree nursing programs located on university campuses of varying size throughout the United States. This population was chosen because maintenance of enrollment in these programs through increase retention efforts is, or will be, essential for their survival. A fifty percent return rate was determined to be an appropriate sample size for this study. In actuality, a 61.2 percent return rate was obtained (N=263) with fifty-six percent being usable (N=243).

Statistical Procedures

The analysis of certain survey questions was hand generated and cross analyzed by a computer statistical package for accuracy. Descriptive statistics (response frequencies, percentages and ranks) were generated to show the relative success rates of various retention efforts. The open-ended responses from the "other" categories on the questionnaire were tabulated by hand and are listed in Appendix E.

Summary of the Major Findings

As a result of the data analyses, the following data
findings are presented in brief.

1. The majority of the respondent institutions (55.5 percent) have organized retention programs either at the departmental level, the university level or both levels.

2. Of the respondent institutions with retention programs, those with both types of programs were the most numerous (46.6 percent) followed by those institutions with university level programs only (40.7 percent) and those institutions with departmental level programs only (12.5 percent).

3. The respondent institutions with retention programs had a statistically significant (.05 level) higher retention rate than those institutions without retention programs. This difference was true for all three sub-groups with the group of respondents with functioning retention programs as compared individually with the group of respondents that had no functioning programs to increase student retention.

4. There was no statistically significant difference among the retention rates of the three sub-groups of respondents that indicated that they had programs in place and functioning to increase student retention.

5. The majority of the respondents (76.3 percent) felt that retention programs were necessary for the maintenance of enrollments in nursing programs.

6. Overall, the area of retention effort which was most successful was concerned with administrative activities
to increase student retention. This area includes such activities as exit interviews with students who withdraw from college, deferred payment plans for registration fees, helpful financial aid departments, admission offices that collect and disseminates student information throughout the institution, and follow-up studies of students who withdraw from the institution.

7. The eleven individual retention activities, of a possible thirty-three, among the other retention effort areas which are found more frequently among the more successful retention programs include: special orientation programs for transfer students; summer orientation for all new students; use of a learning laboratory; early notification of failing grades; mandatory student advisement before each registration period; referal system to campus services; special activities to promote faculty-student interactions; mandatory faculty office hours; identification and assemblage of students with common interests; and, minority student organizations.

8. Of the possible twenty-two retention activities among the remaining retention effort areas, the three found more frequently among the least successful retention programs include: pre-testing for placement; identification of high-risk students; and, on-campus, part-time work-study programs.
Discussion of the Findings

The following discussion of the findings in this study are based upon the collected data and analysis.

1. As a result of the data in this study and analysis, it is concluded that those institutions of higher education with active retention programs have a statistically significantly higher retention rate than those institutions without retention programs.

2. As a result of the data collected in this study, it is concluded that more emphasis should be placed on those retention activities found under the "Administrative Activities" area since they are found most frequently among the most successful retention programs.

3. As a result of the data collected in this study, it is concluded that retention activities found under "Student-Faculty Interaction" should receive the lowest priority in retention programs since they were found least among the most successful retention programs.

Conclusions

The following conclusions are based on the analysis and interpretation of data collected for this study.

1. On the average, the nursing programs surveyed in this study have retention rates similar to the retention rates of all types of institutions of higher education as presented in the literature.
2. Overall, the results indicate that any type of retention program at any level will most likely produce a higher retention rate than no program at all.

3. There should be more programs on the administrative level rather than on other levels since these seem to produce the highest retention rates.

Recommendations

Based on the findings of this study, the following recommendations are made for the enhancement of student retention efforts at all institutions of higher education and the improvement in the study of these activities.

1. This study should be replicated in 1990 using the same population.

2. The questionnaire should be altered so that indications of correlation between retention activities and varying retention rates can be more directly detected.

3. The study should be expanded to include the 456 NLN accredited Associate Degree Nursing programs in the United States.

4. The study should be expanded to include a longer period of time (six to eight years) to include students who are actually "stop-outs" and not "drop-outs."

5. Further research needs to be conducted among all institutions of higher education to determine what types of student retention activities are being used and which are
successful.

6. Chief administrators, administrators in general and faculty need to be encouraged to initiate active retention programs in those institutions of higher education that currently have no such programs.

7. Chief administrators, administrators in general and faculty at those institutions with active student retention programs need to support and broaden those programs.

8. Administrators and faculty at those institutions of higher education with successful student retention programs should be encouraged to publish and disseminate information concerning their programs.
CHAPTER BIBLIOGRAPHY

APPENDIX A

SAMPLE OF THE INSTRUMENT
BACCALAUREATE DEGREE NURSING STUDENT RETENTION PROGRAM QUESTIONNAIRE

SECTION I

Below are several questions concerning your nursing program and your perceptions of the need for efforts to increase student retention.

1. Your Spring 1987 Nursing Graduates represent what percentage of the students enrolled as Nursing majors in 1983? (Note: If your program is strictly an "Upper Division" program, please provide the percentage of graduates from time of admission to your program). __%  

2. As administrator of a Baccalaureate Degree Nursing Program, do you feel there is a need to increase student retention (i.e., keep more of the students initially admitted to your program until graduation)? 
   Yes [ ] 
   No [ ] 

3. Does your nursing department (division, school) have an organized student retention program? 
   Yes [ ] 
   No [ ] 

4. If you do have an organized student retention program, is it functioning? 
   Yes [ ] 
   No [ ] 
   N/A [ ] 

5. Does the University (College) in which your department of Nursing is located have a separate student retention program? 
   Yes [ ] 
   No [ ] 

6. If the University (College) does have a separate student retention program, is it functioning? 
   Yes [ ] 
   No [ ] 
   N/A [ ]

If you have answered "Yes" to either question "3" or "5", please complete Section II of the questionnaire.

If you wish a summary of the results of this study, please check the box to the right. [ ]
SECTION II

Below are listed some of the activities that have been identified in the literature as being most crucial and successful in the attempt to increase student retention at several universities. If your department or university has a specific program to increase student retention, examine the list and check all those activities found either in your department or university.

A. ORIENTATION PROGRAMS

<table>
<thead>
<tr>
<th>DEPT.</th>
<th>UNIV. NO</th>
<th>LEVEL</th>
<th>PRGM.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Special orientation for transfer students
2. Summer orientation for all new students
3. Classes or sessions exploring the purposes of Higher Education
4. Pre-testing for placement and identification of high-risk students
5. Sessions for non-traditional students
6. "Survival Skills" or "Life Skills" workshops for new students
7. Supplying career information, including data on past graduates
8. Other (please explain)

B. SUPPLEMENTAL INSTRUCTION PROGRAMS

(These are academic assistance programs for students with academic problems)

<table>
<thead>
<tr>
<th>DEPT.</th>
<th>UNIV. NO</th>
<th>LEVEL</th>
<th>PRGM.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Study skills program
2. Individual tutoring
3. Learning laboratory
4. Writing skills program
5. Supplemental classroom instruction
6. Early notification of failing grades
7. Other (please explain)
### C. COUNSELING AND ADVISING

<table>
<thead>
<tr>
<th></th>
<th>DEPT. LEVEL</th>
<th>UNIV. LEVEL</th>
<th>NO. PROM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>An &quot;Advising Handbook&quot; listing college resources and services.</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>2.</td>
<td>Advising folders for each student</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>3.</td>
<td>In-service training for faculty advisors</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>4.</td>
<td>An advising/counseling procedure to follow-up students with low midterm grades</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>5.</td>
<td>A central advising center</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>6.</td>
<td>Mandatory participation of all faculty in advising students</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>7.</td>
<td>Mandatory student advisement before each registration period</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>8.</td>
<td>Referal system to campus resources and services</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>9.</td>
<td>Other (please explain)</td>
<td>[ ]</td>
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</tr>
</tbody>
</table>

### D. STUDENT-FACULTY INTERACTION

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>1.</td>
<td>Special sessions or activities to promote faculty-student interaction</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>2.</td>
<td>Mandatory faculty office hours</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>3.</td>
<td>Reward structure (for faculty) for increased student-faculty interaction</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>4.</td>
<td>Organized involvement of faculty in residential hall programs</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>5.</td>
<td>Workshops or seminars for faculty on increasing student retention</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>6.</td>
<td>Other (please explain)</td>
<td>[ ]</td>
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</table>

### E. PEER INTERACTION AND CAMPUS INVOLVEMENT

<table>
<thead>
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<tbody>
<tr>
<td>1.</td>
<td>Student-to-student programs for newly entering non-traditional students</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>2.</td>
<td>Use of undergraduate upperclass students as peer advisors</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>3.</td>
<td>Identification and assemblage of students with common interests</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>4.</td>
<td>Minority student organizations</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>5.</td>
<td>Requirement for freshmen-year dormitory residence</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>6.</td>
<td>On-campus part-time work-study program</td>
<td>[ ]</td>
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</tr>
<tr>
<td>7.</td>
<td>Living/Learning Resident Life program in the dormitories</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>8.</td>
<td>Other (please explain)</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>
F. ADMINISTRATIVE ACTIVITIES

1. Exit interviews with students who withdraw from college
2. Deferred partial payment plan for registration fees
3. Helpful and cooperative financial aid department
4. Admission office collects and disseminates student information to the institution
5. Follow-up studies of students who withdraw from college
6. Other (please explain)

(If there are any other activities at your campus which are designed to increase student retention which have not been covered in the above questions, please feel free to use the remaining space on this questionnaire to list them. Thank you.)

You are now finished. Please return this questionnaire in the enclosed envelope. Do not put any identifying marks or names on it.
APPENDIX B

COVER LETTER
Dear [Name]:

As a professional educator involved in Baccalaureate Nursing education, I am sure that you are concerned with the recent four percent decline in baccalaureate nursing student enrollments as reported in the September/October 1986 NLN News Letter. On top of this recent decline, the Carnegie Council has projected that enrollments will decline some 25 percent by 1990 due to the decrease in numbers of the traditionally aged college students. It is a very realistic assumption that the survival of some of our programs will depend on our ability to maintain enrollment numbers. Increasing the number of students we retain in our program after enrollment and admission is an important way to achieve this goal.

In an attempt to identify which schools are actively involved in student retention and if they are having success in their programs, the following questionnaire has been developed.

Your co-operation is absolutely necessary in order to complete this study. Agreement to participate in the study involves the completion of the enclosed questionnaire. It should require no more than fifteen minutes of your time. You may be assured of complete confidentiality. The questionnaire has an identification code for mailing purposes only. Your school will not be identified in any way. If you, as the administrator, are unable to complete the questionnaire, I would ask that another faculty member of your department be allowed to complete it.

Thank you very much for your co-operation. A study of this nature is not possible without your participation.

Sincerely,

Joseph T. Catalano, MS, RN, CCRN
Assistant Professor
APPENDIX C

SAMPLE OF THE FIRST FOLLOW-UP LETTER
Dear [Name]:

A questionnaire concerning student retention activities at your school was sent to you two weeks ago. It is very important that you complete the questionnaire and return it as soon as possible since this data will help determine which aspects of retention programs work best.

I am requesting your cooperation in this important study. If you have any questions, need additional information concerning the questionnaire or study, please contact me at (405) 332-8000 x 429.

Sincerely,

Joseph T. Catalano
APPENDIX D

SAMPLE OF THE SECOND FOLLOW-UP LETTER
Dear [Name]:

Concerning the questionnaire sent to you approximately one month ago seeking information about student retention activities on your campus, if you have not already completed it, please do so. In the event that the questionnaire was misplaced or lost, I am sending you another copy to complete along with a return envelope.

Your completed and returned questionnaire is important to the validity of this study. I deeply appreciate your cooperation.

Sincerely,

Joseph T. Catalano
APPENDIX E

OPEN ENDED RESPONSES FROM THE SURVEY QUESTIONNAIRE
APPENDIX E

OPEN ENDED RESPONSES FROM THE SURVEY QUESTIONNAIRE

1. Student retention committee at the university level with administrators, faculty, staff, and students.
2. Special freshman courses that stress university offerings.
3. We worry a lot.
4. Identification of high-risk students and provision of tutorials in those areas.
5. Active Nursing Student organization.
6. Intensive advisement during the first six weeks in college.
7. Early identification with faculty advisors from nursing.
8. An advocate program.
9. Large picnic held during the first week of school with all freshmen and transfer students.
10. Students in the dorms have many social functions and invite the faculty advisors.
11. Instructor counseling at mid-term.
12. Visit to high schools by faculty and students.
13. Use of senior students as tutors.
14. Nursing faculty contact each nursing applicant personally following notification from the admissions office of the enrollment of a new student.
15. I really don't know what constitutes a retention program.
16. Identification of high-risk students based on ACT scores and high school GPA.

17. Series of "Town Meetings" sponsored by the Office of Student Life for students to make introductions and recommendations concerning the overall quality of life at the college.

18. Administrator assessment tests to seniors and interpret the results to them.

19. Have students help with orientation.

20. Health and safety concerns of new college students (classes).

21. Pre-registration in formal sessions.

22. Classes offered both days and evenings to meet the needs of working students.

23. A faculty member who serves as Student Retention Coordinator.

24. University makes short term loans available at registration.
APPENDIX F

TABLES
Table 4

Retention Activities Ranked According to Percentages of the Most Successful and the Least Successful Orientation Programs

<table>
<thead>
<tr>
<th>RETENTION ACTIVITY</th>
<th>DEPARTMENT ONLY</th>
<th>UNIVERSITY ONLY</th>
<th>BOTH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>+1 SD</td>
<td>-1 SD</td>
<td>+1 SD</td>
</tr>
<tr>
<td>Special Orientation for Transfer Students</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Summer Orientation for All New Students</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Classes or Sessions Exploring the Purposes of Higher Education</td>
<td>0</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Pre-testing for Placement and Identification of High-Risk Students</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Sessions for Non-traditional Students</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>&quot;Survival Skills&quot; or &quot;Life Skills&quot; Workshops for New Students</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Supplying Career Information Including Data on Past Graduates</td>
<td>0</td>
<td>2</td>
<td>4</td>
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</table>
Table 5

Retention Activities Ranked According to Percentages of the Most Successful and the Least Successful Supplemental Instruction Programs

<table>
<thead>
<tr>
<th>RETENTION ACTIVITY</th>
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<tr>
<td></td>
<td>+1 SD</td>
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<td>+1 SD</td>
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<tr>
<td>Study Skills Programs</td>
<td>2</td>
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<td>2</td>
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<tr>
<td>Individual Tutoring</td>
<td>2</td>
<td>3</td>
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<tr>
<td>Learning Laboratory</td>
<td>1</td>
<td>1</td>
<td>5</td>
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<tr>
<td>Writing Skills Program</td>
<td>0</td>
<td>3</td>
<td>3</td>
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<tr>
<td>Supplemental Classroom</td>
<td>1</td>
<td>2</td>
<td>5</td>
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<tr>
<td>Instruction</td>
<td></td>
<td></td>
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<tr>
<td>Early Notification of</td>
<td>1</td>
<td>2</td>
<td>4</td>
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<tr>
<td>Failing Grades</td>
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Table 6
Retention Activities Ranked According to Percentages of the Most Successful and the Least Successful Counseling and Advising

<table>
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<tr>
<th>RETENTION ACTIVITY</th>
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<th>DEPARTMENT ONLY -1 SD</th>
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<th>UNIVERSITY ONLY -1 SD</th>
<th>BOTH +1 SD</th>
<th>BOTH -1 SD</th>
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<tbody>
<tr>
<td>An Advising Handbook Listing College Resources &amp; Services</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
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<td>Advising Folders for Each Student</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>2</td>
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<tr>
<td>In-Service Training for Faculty Advisors</td>
<td>2</td>
<td>2</td>
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<td>3</td>
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<td>2</td>
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<tr>
<td>An Advising/Counseling Procedure to Follow-up Students With Low Mid-Term Grades</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>2</td>
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<tr>
<td>A Central Advising Center</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>5</td>
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<tr>
<td>Mandatory Participation of All Faculty in Advising Students</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Referral System to Campus Resources and Services</td>
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<td>1</td>
<td>2</td>
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Table 7
Retention Activities Ranked According to Percentages of the Most Successful and the Least Successful Student-Faculty Interactions

<table>
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<tr>
<th>RETENTION ACTIVITY</th>
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<td>+1 SD</td>
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<td>+1 SD</td>
<td>-1 SD</td>
<td>+1 SD</td>
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<tr>
<td>Special Sessions or Activities to Promote Faculty-Student</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
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<td>2</td>
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<tr>
<td>Interaction</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Mandatory Faculty Office Hours</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Reward Structure (for Faculty) for Increased Student-Faculty</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>4</td>
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<tr>
<td>Interaction</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Organized Involvement of Faculty In Residential Hall Programs</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>Workshops or Seminars for Faculty on Increasing Student</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
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<tr>
<td>Retention</td>
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</table>
Table 8

Retention Activities Ranked According to Percentages of the Most Successful and the Least Successful Peer Interaction and Campus Involvement

<table>
<thead>
<tr>
<th>RETENTION ACTIVITY</th>
<th>DEPARTMENT ONLY</th>
<th>UNIVERSITY ONLY</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>+1 SD</td>
<td>-1 SD</td>
<td>+1 SD</td>
</tr>
<tr>
<td>Student-to-Student Programs for Newly Entering Non-Traditional Students</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Use of Undergraduate Upper-class Students as Peer Advisors</td>
<td>0</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Identification and Assemblage of Students with Common Interests</td>
<td>1</td>
<td>3</td>
<td>2</td>
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<tr>
<td>Minority Student Organization</td>
<td>0</td>
<td>3</td>
<td>1</td>
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<tr>
<td>Requirement for Freshman-Year Dormitory Residence</td>
<td>0</td>
<td>0</td>
<td>4</td>
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<tr>
<td>On-Campus Part-Time Work-Study Program</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Living/Learning Resident Life Program in the Dormitories</td>
<td>1</td>
<td>0</td>
<td>3</td>
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Table 9

Retention Activities Ranked According to Percentages of the Most Successful and the Least Successful in Administrative Activities

<table>
<thead>
<tr>
<th>RETENTION ACTIVITY</th>
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<td>+1 SD</td>
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<tr>
<td>Exit Interviews with Students Who Withdraw from College</td>
<td>1</td>
<td>1</td>
<td>3</td>
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<tr>
<td>Deferred Partial Payment Plan for Registration Fees</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Helpful and Cooperative Financial Aid Department</td>
<td>0</td>
<td>0</td>
<td>1</td>
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<tr>
<td>Admission Office Collects and Disseminates Student Information to the Institution</td>
<td>0</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Follow-up Studies of Students Who Withdraw from College</td>
<td>2</td>
<td>2</td>
<td>3</td>
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</table>
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