Remediation and Retention of Students on First-Time Scholastic Drop (R&R).

Dee Anna Slavant

Louisiana State University and Agricultural & Mechanical College

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REMEDICATION AND RETENTION OF STUDENTS ON FIRST TIME SCHOLASTIC DROP (R&R)

A Dissertation

Submitted to the Graduate Faculty of the Louisiana State University and Agricultural and Mechanical College in partial fulfillment of the requirements for the degree of Doctor of Philosophy in The School of Vocational Education

by

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B.S., University of Tulsa, 1972
MEd., Louisiana State University & Agricultural and Mechanical College, 1983
December, 1998
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Nothing is accomplished alone. Each task, each milestone, each step requires that others lend support, offer assistance, and sometimes give up some of themselves that others might achieve. This is certainly true in the case of writing this dissertation. Special acknowledgments go to all those who helped and guided me along the way.

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ABSTRACT

The Remediation and Retention Program (R&R) was initiated at Louisiana State University at Alexandria to develop interventions that target first time scholastic drop students and facilitate the improvement of their overall academic performance and retention. The study was designed to provide support counseling and study skills remediation for students who self selected to readmit under the R&R Program. The study was formulated to evaluated the progress and retention rate of the R&R Program. Objectives and results of the study included: (1) Describe the students who were placed on first time scholastic drop at LSUA. The average age was 21.97; 62.2% were female and 37.8% male; most frequent college major listed was pre-nursing, liberal arts, and elementary education; average composite ACT score was 17.63, average beginning GPA was .957 and average number of completed college credit hours was 18.99; (2) Comparing the R&R Group with the Non Participant Group on selected variables found that there was no significant difference in age, gender, and ACT scores. The Remediation and Retention Group had significantly higher beginning cumulative GPA, had previously earned more college credit hours than the Non Participant Group and had a statistically significant higher cumulative GPA after treatment; (3) No relationship was found between the number of counseling sessions attended and semester GPA; (4) No difference was found in the semester GPA and attendance at the study skills seminar for the Remediation and Retention Group; (5) Forty-eight percent of the students in the Remediation and Retention Program attained a semester GPA of 2.0 or higher; (6) A
significant difference was found on the variable persistence between the R&R Group and the Non Participant Group. The Remediation and Retention Group had a significantly higher proportion of students who were still enrolled two semesters after treatment; and (7) The predictive value of 88.03% of students correctly classified on persistence is misleading because of skewed data. No students were predicted to persist.
CHAPTER I

INTRODUCTION

Post secondary institutions face exceptional challenges in today’s education and economic environment. Increasing college costs, decreasing and/or limited funding, diminishing public confidence, a changing work place and a shrinking pool of traditional-age college students creates an environment in which institutions must compete for students. As the competition for students increases, it is important that universities find effective ways of retaining the currently enrolled students and attracting new students to campus (Altmaier, Rapaport, & Seeman, 1983). In order for institutions to successfully compete for students, effective retention practices must be developed (Noel, Levitz, Saluri, & Associates, 1987). The development of retention programs will have some commonalities, such as improving services and developing student potential through active interventions (Smith, 1995). Programs must be uniquely designed to meet the needs of the students that the institution serves. Post secondary institutions that accept this challenge and develop meaningful programs that attract students, develop student satisfaction and increase retention rates while maintaining quality educational standards will be the ones who do well in this competitive market.

As markets change, response to that change must reflect the needs of the students served. Smith (1995), in a report concerning marketing post secondary institutions, proposed that students be considered customers. He discussed the need for repositioning existing programs and services to meet the needs of both the traditional and nontraditional students. Services provided by post secondary institutions have remained...
mostly unchanged for many years. A look at the student profile of any institution will find a different student population than was there five, ten or twenty years ago. The traditional student profile of a recent high school graduate, living on campus and academically prepared to meet the demands of college level academic activities is no longer the norm. The nontraditional age student (25 years of age and older) has had a significant impact on the make-up of the student body of many college campuses. Many of these nontraditional students are first generation college students, have inadequate academic preparation and must juggle school, family and a job. Yet systems and services are not reflecting the changing student. Smith (1995) discussed total quality management (TQM), transformational leadership, mobilizing institutions for success and proactive change as ways to address the issue of change in response to the customers (students) needs.

The idea of students as customers does not go far enough. Students are the stockholders in the educational arena. Students invest a tremendous amount of money, time and effort in the pursuit of their educational goals. Post secondary institutions need to accept the responsibility of marketing the educational package so that the stockholders (the students) will want to invest their educational time with the institution that offers them an educational experience that leads to academic success. The business of post secondary institutions is to design programs which meet students' academic needs in the classroom with quality and relevant instruction. In addition, programs need to insure adequately support with programs that prepare and promote student success. This does not mean that colleges must sacrifice quality. On the contrary, the student as
stockholder is investing in a quality product and expecting services to support their experience.

Background and Setting

Louisiana State University at Alexandria (LSUA) is located six miles south of Alexandria in central Louisiana. The rural setting reflects the original Oakland Plantation. The campus is one of eight institutions of the Louisiana State University System. A young institution, LSUA registered the first students in 1960. Classes were conducted in one building with an enrollment of 322 students.

The first associate degree program offered at LSUA was in the Division of Nursing in 1964. Today four academic divisions and the James C. Bolton Library constitute LSUA's five divisions. An Associate of Arts and Associate of Science transfer degrees were first offered in May 1986. LSUA was fully accredited by the Southern Association of Colleges and Schools (SACS) in 1974, and reaffirmed accreditation in 1984, and again in 1997.

The only public institution of higher education in a nine-parish area, the university offers a vital link to higher education for those living in central Louisiana (Upton, 1996). The university has an open-door policy, requiring only a high school diploma or its equivalent. This type of entrance policy leads to a student body of diverse individuals. Some LSUA students have the ACT scores, high school grade point average (GPA), or other defining criterion that would offer them the opportunity to enter other post secondary institutions where admission is based on competitive entrance requirements. However, an open admission policy creates a situation where many
students being admitted to the university may lack an adequate academic background that would support their success at the post secondary level.

Some students attend LSUA to receive their first two years of college work where tuition is low, classes are small and adjustment to higher education settings may be less stressful. Many of these students plan to transfer to other universities after the completion of their work at LSUA. These students generally are the recent high school graduates who do not have to address place bound issues. Many students, both traditional and nontraditional, enter LSUA in a two-year degree program that leads directly to employment. Other LSUA students, particularly the nontraditional students, are often place bound, being either unable or unwilling to go beyond their immediate environment to attend college. With such a diverse student population, students enter the university with varying levels of preparation and bring with them the many problems that this diversity and possible lack of academic preparation can manifest.

The socioeconomic factors in the LSUA service area also affect the type of student served (see Table 1). With a per-capita income in 1994 of less than $18,000, and an unemployment rate that is consistently above state average, the impact on the type of students served is evident. Combining these factors with limited economic opportunity without additional education reflects the urgency and importance of a college education to the typical LSUA student.

The combined population of the Alexandria/Pineville area is 61,489. The total LSUA service area is estimated to be 623,350. Most of the surrounding towns are
Table 1

Socioeconomic Factors in the Louisiana State University at Alexandria Service Area

Population

Population 1990 Census 562,871


Median household effective buying income:

<table>
<thead>
<tr>
<th>Year</th>
<th>Median Household Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>$33,697</td>
</tr>
<tr>
<td>1993</td>
<td>$35,697</td>
</tr>
<tr>
<td>1994</td>
<td>$37,679</td>
</tr>
<tr>
<td>1995</td>
<td>$39,766</td>
</tr>
<tr>
<td>1996</td>
<td>$41,753</td>
</tr>
<tr>
<td>1997</td>
<td>$43,840</td>
</tr>
<tr>
<td>1998</td>
<td>$44,903</td>
</tr>
</tbody>
</table>

Unemployment rates (%):

<table>
<thead>
<tr>
<th>Year</th>
<th>Unemployment Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>7.8%</td>
</tr>
<tr>
<td>1991</td>
<td>9.5%</td>
</tr>
<tr>
<td>1992</td>
<td>9.7%</td>
</tr>
<tr>
<td>1993</td>
<td>8.6%</td>
</tr>
<tr>
<td>1994</td>
<td>9.7%</td>
</tr>
<tr>
<td>1995</td>
<td>8.3%</td>
</tr>
<tr>
<td>1996</td>
<td>7.9%</td>
</tr>
</tbody>
</table>

Per-capita Income:

<table>
<thead>
<tr>
<th>Year</th>
<th>Per-capita Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>$10,014</td>
</tr>
<tr>
<td>1991</td>
<td>$10,887</td>
</tr>
<tr>
<td>1992</td>
<td>$15,189</td>
</tr>
<tr>
<td>1993</td>
<td>$16,579</td>
</tr>
<tr>
<td>1994</td>
<td>$17,800</td>
</tr>
</tbody>
</table>

Total Retail Sales:

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Retail Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>$1,014,850</td>
</tr>
<tr>
<td>1991</td>
<td>$1,110,494</td>
</tr>
<tr>
<td>1992</td>
<td>$1,120,392</td>
</tr>
<tr>
<td>1993</td>
<td>$1,350,000</td>
</tr>
<tr>
<td>1994</td>
<td>$1,396,015</td>
</tr>
<tr>
<td>1995</td>
<td>$1,921,859</td>
</tr>
</tbody>
</table>

Education Levels

<table>
<thead>
<tr>
<th>Year</th>
<th>High School Graduates</th>
<th>College Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>69%</td>
<td>14.6%</td>
</tr>
</tbody>
</table>

Note. Data obtained from Central Louisiana Chamber of Commerce Economic and Demographic Profile 1997, and the Louisiana State University at Alexandria Fact Book 1996, by Jerry W. Upton, 1996, p. 8. (Reprinted by permission of the chancellor; see Appendix A)
smaller, and rural in economic base. LSUA serves an area of 17 parishes, and acts more as a regional rather than a local center of higher education (Upton, 1996).

Since the inception of LSUA, student enrollment climbed steadily from 322 students in 1960 to an all time high of 2,771 students in 1992. In 1993, enrollment started to decline and has continued to decline to the current level of 2,409 students in 1997 (see Table 2).

Table 2
LSUA Student Enrollment Comparison 1990-1997 by Sex and Marital Status

<table>
<thead>
<tr>
<th>Year</th>
<th>Female Married</th>
<th>Female Single</th>
<th>Male Married</th>
<th>Male Single</th>
<th>Total Married</th>
<th>Total Single</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>150</td>
<td>574</td>
<td>771</td>
<td>909</td>
<td>921</td>
<td>1483</td>
<td>2404</td>
</tr>
<tr>
<td>1991</td>
<td>173</td>
<td>640</td>
<td>848</td>
<td>1010</td>
<td>1021</td>
<td>1659</td>
<td>2680</td>
</tr>
<tr>
<td>1992</td>
<td>207</td>
<td>641</td>
<td>863</td>
<td>1060</td>
<td>1070</td>
<td>1701</td>
<td>2771</td>
</tr>
<tr>
<td>1993</td>
<td>251</td>
<td>591</td>
<td>772</td>
<td>1008</td>
<td>1023</td>
<td>1599</td>
<td>2622</td>
</tr>
<tr>
<td>1994</td>
<td>227</td>
<td>573</td>
<td>749</td>
<td>932</td>
<td>976</td>
<td>1505</td>
<td>2305</td>
</tr>
<tr>
<td>1995</td>
<td>192</td>
<td>597</td>
<td>743</td>
<td>1014</td>
<td>935</td>
<td>1611</td>
<td>2546</td>
</tr>
<tr>
<td>1996</td>
<td>150</td>
<td>535</td>
<td>690</td>
<td>1056</td>
<td>840</td>
<td>1591</td>
<td>2431</td>
</tr>
<tr>
<td>1997</td>
<td>142</td>
<td>527</td>
<td>660</td>
<td>1080</td>
<td>802</td>
<td>1607</td>
<td>2409</td>
</tr>
</tbody>
</table>

England Air Force Base closed in 1993 and a decline was expected that reflected the service personnel that attended LSUA while stationed in Alexandria. After the initial decline from the base closing, enrollment improved slightly from a low of 2,305 students in 1994 to 2,546 and has been on a slight decline ever since. Some at the
University feel that declining enrollment at LSUA can be linked to the economic climate. When employment in the area is up, enrollment goes down. According to the 1997 Central Louisiana Chamber of Commerce Economic and Demographic Profile, since the completion of Interstate 49, economic conditions have improved in central Louisiana. The theory that the employment is linked to student enrollment may be valid.

The leadership of LSUA looked at several indicators for reasons for the decline in enrollment and ways to improve the enrollment picture. The first line of offense was to increase the recruitment of high schools for potential students. While the number of potential college bound high school students had decreased overall, the recruitment efforts for the students in the area needed improvement. Recruiting was being addressed, but efforts were assessed and improved. In the past, enrollment continued to increase and thus recruitment efforts reflected complacency. The university took a new approach and selected a plan of action that included informing potential students and parents of the availability of a quality education and the other assets offered by LSUA, namely an excellent education at the lowest tuition rate in the state. Outreach activities that reflected this approach were increased and intensified.

The student population at LSUA has a large segment of nontraditional students with the percent running from the mid to high 40% range. Efforts to increase enrollment included activities to attract additional students from this segment of the population. Information booths were established at various times in the local mall. Programs and class offerings were reassessed for appropriateness of time and day. New avenues of academic services were developed. An electronic classroom was designed...
and implemented, LSUA-LPB telecourses were developed, a University Center in Alexandria was acquired, and a classroom was placed downtown in one of the banks offering noontime classes to those working in that area. Courses were also offered at Pinecrest Developmental Hospital, the Veterans Hospital and at the Alexandria Zoo.

In addition to the above interventions, a Developmental Learning Lab (DELL) was established through Carl Perkins funding (Public Law No. 101-392) to assist career degree seeking students through the use of remediation software supported by tutors. Free tutors in most basic subject areas were provided in the Learning Center. The Learning Center is also the center of the developmental courses offered to students who lack academic preparation for college performance.

LSUA has an open admissions policy. The American College Test (ACT) is required, although not for admissions purposes. Scores are used for placement in remedial work for students who are not academically prepared to address college curricula. Students' ACT scores are entered into a university data base where a program automatically places them in the correct level of selected course offerings (see Table 3). Some students enter the university without taking the ACT. These students are allowed entry contingent on their taking all remedial course work.

Further assessment of the total enrollment picture revealed a loss of students each semester from 1994 through 1997 due to academic problems. Using Tinto's 1987 work, Gerdes and Mallinckrodt, (1994) reported that more than 40% of all college students leave without earning a degree, 75% drop in the first 2 years. Most post secondary institutions can expect that 56% of entering freshman will not graduate (Gerdes et al. 1994).
### Table 3

**ACT Academic Course Placement Criteria Used at LSUA**

<table>
<thead>
<tr>
<th>ENGLISH</th>
<th><strong>Enhanced Act English Score</strong></th>
<th><strong>Placement</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>0-16</td>
<td>English 0002 (non credit)</td>
<td></td>
</tr>
<tr>
<td>17-25</td>
<td>English 1001</td>
<td></td>
</tr>
<tr>
<td>26 - higher (and a minimum total of 53 on English plus composite)</td>
<td>English 1002</td>
<td></td>
</tr>
</tbody>
</table>

If minimum total on English plus Composite is less than 53, placement is in English 1001. A total of 65 on the combined ACT English and Composite Scores receives credit for both English 1001 and 1002.

<table>
<thead>
<tr>
<th>MATH</th>
<th><strong>Enhanced ACT Math Score</strong></th>
<th><strong>Placement</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>0-16</td>
<td>Math 0001 (non-credit)</td>
<td></td>
</tr>
<tr>
<td>17-21</td>
<td>Math 0002 (non-credit)</td>
<td></td>
</tr>
<tr>
<td>22-30</td>
<td>Math 1021</td>
<td></td>
</tr>
<tr>
<td>31 - higher</td>
<td>Math 1021 and 1022 and/or is eligible to take a retest to determine advanced placement, (Math 1022 or 1550)</td>
<td>Advanced placement is NOT automatic.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CHEMISTRY</th>
<th><strong>Enhanced ACT Math Score</strong></th>
<th><strong>Placement</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>0-16</td>
<td>Must pass Math 0001 before Chemistry</td>
<td></td>
</tr>
<tr>
<td>17-21</td>
<td>Chemistry 1001</td>
<td></td>
</tr>
<tr>
<td>22-higher</td>
<td>Chemistry 1201</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>READING</th>
<th><strong>Enhanced ACT Reading Score</strong></th>
<th><strong>Placement</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>0-13</td>
<td>Reading 0001</td>
<td></td>
</tr>
<tr>
<td>14-16</td>
<td>Reading 0005</td>
<td></td>
</tr>
<tr>
<td>17 and above</td>
<td>EXEMPT</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COLLEGE STUDY SKILLS</th>
<th><strong>Enhanced ACT Composite Score</strong></th>
<th><strong>Placement</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>0-16</td>
<td>Study Skills 0006</td>
<td></td>
</tr>
</tbody>
</table>

**Note.** A student who registers without ACT scores is subject to placement in Developmental Courses Exclusively.  
Reprinted from the LSUA 1997 Catalog by permission of the Chancellor (Appendix A).
Students find themselves on academic probation and ultimately first time scholastic drop for a variety of reasons. Students on scholastic drop can be helped to overcome many contributing factors to scholastic drop through interventions and remediation of the identified problem areas.

In the fall of 1995, the Registrar's office, in conjunction with the Counseling Center at LSUA, began offering students who were placed on first time scholastic drop at the end of the Spring and Summer semesters of 1995 an opportunity to participate in a new program that would allow them to continue attending the university. Students who were experiencing academic difficulty were notified through a message on their grade card that informed them that they had been placed on scholastic drop for one semester. A letter followed informing the student that they would be allowed to continue enrollment if they agreed to participate in a special program (See Appendix B). Students were invited to meet with the Registrar for further explanation of the program. Students were allowed to register for up to six hours of course work contingent on their agreement to a contract that would include attending a study skills seminar and scheduled counseling sessions.

From the Fall semester 1995 to the Fall semester 1997, approximately 13% of students attending LSUA were placed on academic probation or were continued on academic probation (see Figure 1). Students were placed on academic probation whenever their GPA and number of total hours carried dropped below allowable limits under university policy. Academic probation status includes factors such as number of hours carried, and a cumulative GPA. In addition, approximately four percent of the
Figure 1

The scholastic probation decision chart used to determine academic standing at LSUA.
students are placed on scholastic drop. Students are placed on scholastic drop when they have not made satisfactory progress the semester after being placed on academic probation (see Figure 1 for academic probation decision chart). The university defines satisfactory progress as making a 2.0 or higher GPA the semester after being placed on academic probation.

LSUA is dedicated to helping students succeed in fulfilling their educational goals. This search for excellence in student support services led to the development of the Remediation and Retention Program that is the focus of this research. LSUA has identified an enrollment problem and has instituted an intervention that requires testing for appropriateness and effectiveness.

Statement of the Problem

This study was an evaluation of the effectiveness of the Remediation and Retention Program for students placed on first time scholastic drop at LSUA. The study also included the identification of predictors of retention for those in the Remediation and Retention program. Descriptive analysis of the student population who are on first time scholastic drop was needed for further programming and assessment. A dramatic and continual drop in enrollment numbers at LSUA made it necessary to evaluate the current situation and to begin programs that were designed to assist students who were having academic difficulties.

The LSUA administration was concerned about the students whom the university was losing due to scholastic drop. If the student is not present, services to remediate and retain them are mute. Students on scholastic drop not only cost the University in
enrollment numbers, but many students who are placed on first time scholastic drop may never return to college. This concern lead to the development of the current policy that allows students placed on scholastic drop to re-enter under the specially developed program of remediation and retention. In a continuing search for excellence and effectiveness, it is necessary to evaluate the R&R Program for effective use of time, effort, and resources.

Purpose and Objectives

The purposes of this study were to evaluate the Remediation and Retention Program for students who are placed on first time scholastic drop, to establish predictors of retention for those in the Remediation and Retention program, to describe the population, and to serve as a model for other universities.

Objective 1: Describe college students who were placed on first time scholastic drop between spring semester 1995 and fall semester 1997 using the following selected demographic characteristics:

a. Age at the time students were dropped from the university;

b. Gender;

c. College Major;

d. Scores attained on the American College Test (ACT)

(English, math, reading, and natural sciences);

e. Selected grade point average (GPA) measures (cumulative GPA at the time students were dropped from the university), cumulative GPA at the beginning and end of the Remediation and Retention Program (for
students who self selected to participate in the program only), and GPA for the semester of participation in the Remediation and Retention program (for students who self selected to participate in the program only); and

f. Number of semester hours of college credit earned prior to being placed on first time scholastic drop.

Objective 2: Compare the students who self selected to participate in the Remediation and Retention Program with those who chose not to participate in the program on the following selected academic and demographic characteristics:

a. Age at the time they were dropped from the university;

b. Gender;

c. College Major;

d. Scores attained on the American College Test (ACT) (English, math, reading and natural sciences);

e. Selected grade point average (GPA) measures (cumulative GPA at the time students were dropped from the university), and cumulative GPA at the beginning and the end of the R&R program (for students who self selected to participate in the program only); and

f. Number of semester hours of college credit earned prior to being placed on academic probation.

Objective 3: Determine if a relationship exists between the number of counseling sessions attended by the students participating in the Remediation and
Retention Program and their academic performance (as measured by GPA for the treatment semester).

Objective 4: Compare the academic performance of students participating in the Remediation and Retention Program (as measured by GPA for the treatment semester) by whether they attended a scheduled Study Skills Seminar.

Objective 5: Determine the proportion of the students participating in the Remediation and Retention Program who attained a satisfactory GPA (defined as 2.00 or higher) for the treatment semester.

Objective 6: Compare students in the Remediation and Retention Group with the Non Participant Group on retention rate (as measured by the proportion of students enrolled in the university two semesters after they were dropped from the university).

Objective 7: Determine if a model exists that significantly increases the researcher's ability to correctly classify the Remediation and Retention Group and the Non Participant Group on whether they are still enrolled in the university two semesters after they completed the treatment semester using the following personal and academic characteristics;

a. Age at the time they were dropped from the university;

b. Gender;

c. Composite score on the American College Test (ACT);

d. Grade point average (GPA) (cumulative GPA at the time they were dropped from the university;
e. Number of semester hours of college credit earned prior to being placed on first time scholastic drop and;

f. Whether they self selected to participate in the remediation program.

Definition of Terms

Remediation and Retention Program (R&R) - The R&R Program is a program designed to provide interventions for those students who were placed on first time scholastic drop at LSUA. Remediation is addressed through a study skills seminar and counseling sessions. The goal of the program is to assist students to continue attending college and ultimately achieve their academic goals.

Louisiana State University at Alexandria (LSUA) - LSUA is a small community college located in central Louisiana. With an average enrollment of between 2500 and 2600 students, the five divisions provide programs that support the attainment of associate degrees, the first two years of general education in various disciplines, and provide educational enrichment for those not seeking degrees.

Grade Point Average (GPA) - A student’s grade point average is determined by dividing the total number of hours pursued into the total number of quality points earned. Quality points are assigned to letter grades as follows:

“A” = 4 quality points;

“B” = 3 quality points;

“C” = 2 quality points;

“D” = 1 quality point;
“F” = 0 quality points;

“P” - Pass; “NC” - No Credit;

“W” - Withdrew; “I” - Incomplete.

Grading symbols of “P”, “NC”, “W”, and “I” are not used in computing the official grade point average and, therefore, do not carry quality points.

**Nontraditional students** - Students 25 years of age and older

**Scholastic Probation** - Students are placed on scholastic probation when they have completed between one and eleven semester hours and GPA is below 1.5; when student has completed 12 to 24 hours and have a GPA ranging from 1.0 to 1.499; and when a student has 25 or over semester hours and GPA is below 2.0.

**First Time Scholastic Drop** - Students who are academically dismissed for a period of one semester.

**American College Testing (ACT)** - Nationally normed test used by some universities as an indicator of academic success.

**R&R Group** - Students who self selected to participate in the Remediation and Retention Program.

**Non Participant Group** - Students on first time scholastic drop who did not participate in the R&R program.

**Total Group** - Includes both the R&R Group and the Control Group.

**Treatment Semester** - The semester of participation in a study skills seminar and counseling sessions.
CHAPTER II
REVIEW OF LITERATURE

The purpose of the review of literature is to present a summary of the research related to the areas encompassed by this study. These areas are:

1) An overview of programs designed to retain students through the completion of their program of study.

2) Proactive and reactive retention programs.

3) Studies that support the foundation for the type of program designed in this study.

Introduction

Post secondary institutions are confronted with unique and challenging opportunities. The Industrial Age is struggling to hold on to an era that is no longer viable while the Information Age is struggling to take center stage. Employment patterns are in turmoil as workers wrestle with the new concepts that affect the way people work and seems to threaten the way of life to which they have become accustomed. Post secondary institutions must acknowledge these changes and challenges in order to prepare the workers of the future by providing educational enrichment experiences, providing for the renewal of skills and providing for the acquiring of new skills. Efficiency, graduation rates, retention, student efficacy, relevant curriculum, customer service, etc., are areas that must be addressed with new determination to produce an educated person who is capable of not only survival, but one who will thrive in a changing world (Aslanian, 1995).
The past 25 years have brought unprecedented growth in enrollment numbers on college campuses. Aslanian (1995) reported that enrollments on college campuses increased almost 50% in the 1970's. During the eighties, high schools were graduating 25% fewer seniors, and at the same time college enrollments produced another increase in enrollment of 12.5%. While the pool of high school seniors has continued to shrink, college enrollment growth reflects the increase in the number of nontraditional students (25 years of age and older) who continue to enter college. This increase of nontraditional students is supported by a 45% increase in the number of students 35 years of age and older who are attending college. The writer stated that "the college student who is full time, in residence, and less than 22 years of age accounts for only about 20% of all college students in the United States" (Aslanian, 1995 p.1 of Supplementary Information).

The reality of a shifting student population accompanied by increased efforts to link funding with accountability through graduation rates presents special problems for the post secondary institution. Aslanian (1995) reported that the unprecedented growth of post secondary institutions began to show a decline in 1993. The reality of a shrinking pool of traditional age students coupled with the reality that the nontraditional age enrollment has slowed, sets the stage for increased competition for students. The number of students who are attempting college and who are academically unprepared to meet the demands and academic standards required for successful academic performance increases the need for post secondary institutions to develop a broader range of programs designed to support retention of students. Retaining and supporting
students in their educational experience is more cost effective than it is to continue to recruit and admit new students. The educational market of the nineties and beyond makes it increasingly important that post secondary institutions be concerned with the realities of declining enrollments, increased competition for students and the number of students who are attempting college who are academically unprepared to meet the demands and academic standards required for successful academic performance (Aslanian, 1995).

Vukovich (1982) stated that as early as 1928, Ferguson commented that the concept of probation and remedial interventions were nothing new. The literature reflects that in the fifties and sixties, studies such as Jones’ and Fisher’s were being developed to try to describe and address the issues surrounding retention. During this period colleges and universities experienced unprecedented growth (Vukovich, 1982). As the seventies unfolded, post secondary institutions were beginning to deal with a different type of student. The awareness that nontraditional students were beginning to make their presence known brought with it an increase in activity directed at retention efforts. The retention efforts of the eighties were characterized by a broader range of programs developed to support increased retention. The decreasing numbers of traditional aged college students, the increase in minority students, and the increase of the nontraditional student (ages 25 and older) created special challenges for institutions. The final focus of the nineties is not complete. Nevertheless, institutions are increasingly looking for ways not only to attract new students from all sectors, but are developing programs designed to support and retain them (Vukovich, 1982).
Colleges are being challenged with funding adjustments that increasingly base funding formulas on graduation rates. Therefore, it is essential that institutions have programs in place to address the issue of retention. These programs may begin with directed recruitment activities that include enrollment management, freshman orientation and mentoring, as well as specific intervention programs designed to assist students in meeting their educational goals (Noel, Levitz, Saluri & Associates, 1987).

Trends that are likely to continue include recruiting the students most likely to succeed at an institution and retention management systems that allow institutions to track and evaluate student progress (Noel et al.1987).

Developmental classes are another attempt by institutions to address academic weaknesses identified by testing (Upcraft, Gardner, & Associates, 1990). These classes became common place during the eighties and nineties. The classes were designed to remediate students with weak academic skills and provide an opportunity for those students to enter regular course work with an increased chance for success. In the past few years, some institutions have dropped their developmental classes. Some question the value of college for students with low academic readiness. In spite of pressure to eliminate developmental courses, many institutions continue to offer this vital link to students who need additional preparation (Upcraft et al.1990)

Tinto (1990) stated that developing effective programs that will promote successful academic performance and retention should give less concern to the types of programs designed to retain students and focus more on how and why they work.
Whatever approach is used, the essential element is that effective programs are developed that support student success and retention.

Characteristics of Students on Scholastic Probation

When students enter college they bring with them previously developed and intrinsic abilities and aptitudes. The level of the student’s abilities and aptitudes can enhance the student’s chances of being academically successful in college, or the level of abilities and aptitudes may not be adequate for successful academic pursuits at the college level. Although some students with low ACT or SAT scores achieve academically, these scores are usually reliable predictors of college success (e.g. Droge & Roundy, 1992; Smittle, 1992; Stewart, 1997) The number of hours per week a student works, poor study skills, high school grade point average, first generation college students, and unclear goals are also factors that affect the academic performance of students. In a study conducted by Olson (1990), students on academic probation identified lack of effective study strategies, work responsibilities, and unclear goals as the factors that affected their academic performance.

A study done in 1991 by Cooper investigated the factors that contributed to the academic probation of the College of Bahamas (COB) students. Cooper researched the demographic characteristics, and studied the factors considered as contributors to academic probation by students and college personnel. The researcher found that those students on academic probation were most often assigned to remedial English and math and that they most often failed English and math. Demographically, the COB students on academic probation were 66% female with the group representing 70% of the total
enrollment. The contributing factors to academic performance identified by the COB students and personnel were low academic ability, personal problems, and poor adjustment to college (Cooper, 1991). The researcher concluded that COB students on academic probation had a problem similar to students at comparable institutions. Cooper (1991) concluded that COB students were not adequately monitored prior to getting into academic difficulty.

Wade (1995) used a 1995 retention model developed by Bean and Metzner to describe variables related to persistence for nontraditional students. The study also purposed to formulate predictive variables for persistence and make program recommendations. Two questionnaires were completed during the fourth and twelfth week of class by 523 (N=1702) students. The researcher used Discriminant analysis to predict group membership. Wade found 19 of the 52 variables were significant. Prediction of group membership was correct in 79% of all cases. Commitment to an educational goal was identified as the main characteristic that predicted persistence (Wade, 1995).

Napoli (1996) conducted a study designed to validate the 1975, 1987, and 1993 work of Tinto's model of persistence on a community college sample. Analysis involved using both academic and social integration in the decision to persist in college. The researcher found that both academic integration and social integration play important roles in the decision to persist in college. Napoli observed that the impact of social integration was greatest for a term-to-term persistence and diminished over time. Variables such as positive or negative life events, personal conscientiousness,
psychological well-being, and satisfaction with the academic, administrative, and social systems of college were found to have direct and indirect effects on college persistence.

In an update of earlier studies, Brawer (1996) reviewed ERIC documents of the 1990's to identify factors associated with reasons students leave college programs. Brawer found a 1995 study by Moore and a 1994 study by Windham reported students whom they classified as full-time students were more likely to persist than those who attended part-time. The findings concerning the effects of age on persistence may be conflicting. Brawer (1996) reported in a 1993 study by Price that found younger students were persisters and that older students were conversely non persisters. In another 1993 study cited by Brawer, Feldman concluded that pre enrollment predictors found those students between the age of 20 to 24 were more likely to drop out. A study at Patrick Henry Community College in Virginia conducted by Mohammadi (1996) concluded that after one year, attrition rates were higher for the students in the age range of 23-35 and 45-50 years.

Heaney (1996) reported that learning and effective study strategies were related to persistence among community college freshman. Heaney's study found that nontraditional students were more successful than younger more traditional aged students. Brooks (1991) reported that predictors of attrition in a community college were identified as part time enrollment status, working full time, taking non degree courses, and students over the age of forty years.

Nespor and Roueche (1983) of the University of Texas conducted a study of student attrition by studying students on academic probation. The study identified eight...
major characteristics that were common among students who were having academic difficulties. The major findings revealed that students on scholastic probation had a very high number of classes where they received no credit. Nespor & Roueche (1983) referred to these no credit grades as "nonproductive" grades. The nonproductive grades were identified as a grades of "NC" (no credit), "I" (incomplete) that later were replaced by an "F"; and those students who had a disproportionate number of "W's" (withdraws) (Nespor & Roueche, 1983). Students on academic probation were frequently found to repeat courses, with little to minimal improvement in performance. These students were also found to enroll in courses without completing the prerequisites. It may be presumed by some that students in developmental classes would be represented by higher numbers, but this was not the case. Nespor and Roueche found that the characteristics exhibited by the students on academic probation were representative of the entire student body. However, Hispanics and Blacks were over representative in the group of students on academic probation. Students on academic probation were unsure about their academic future, and were more likely to seek counseling (Nespor & Roueche, 1983).

Nespor and Roueche (1983) found that many students on academic probation reported similar problems that contributed to their academic standing and that they felt they had no control over their academic outcomes. Shift change, illness, and travel requirements of their jobs were frequently sighted as interfering with the ability to perform successfully in their course work. Students on academic probation tended to withdraw from classes where the course requirements were demanding (Nespor &
Roueche, 1983). Perhaps the demands of work and family are factors that contribute to students' class selection and ultimate withdrawal status. Nespor et al. (1983) reported that students on academic probation often did not view their academic standing realistically. Some students on academic probation do not understand what is required in order for them to be academically successful. Nespor et al. (1983) suggested that some students may be in denial concerning how low their grade point average is and do not understand the effort needed to correct the situation.

The University of Iowa Counseling Center developed a research project that targeted the identification of contributing factors that influenced students being placed on academic probation. This program identified four types of contributors to students being placed on academic probation: (1) lack of ability, (2) emotional problems, (3) a neurological dysfunction, and (4) not working to full potential (Altmaier, Rapaport, & Seeman, 1983). With such a range of problems presented by students, programs are difficult to design that meet the needs of such a diverse student body. This study was conducted using liberal arts students who had been placed on academic probation. A survey was used to identify the students' perception of contributing factors to being placed on academic probation. The areas most often identified as interfering with their academic performance were: poor study habits or skills, failure to keep up with course work, lack of discipline or motivation, required courses the student did not want to take, not scheduling time wisely, uncertainty over career goals, and inability to concentrate (Altmaier et al. 1983).
Syracuse University approached the identification of characteristics of students on academic probation by looking at contributing family system analysis. The study pointed out that the factor of family is left out of many retention programs. Fish, Blumbery, and Ledit (1989) asked the question, "What are the family characteristics of students on academic probation?" It was hypothesized that not having information concerning family issues, academic advisors may be hesitant to approach this subject. The study to identify family issues characteristic of students on academic probation included 75 undergraduate students at one northeastern university. The sample included students who were in good academic standing and students on academic probation. A 45-item questionnaire was used to elicit demographic and academic information. Fish et al. (1989) found that students who had good academic standing were less satisfied with their families than students on academic probation. Students on academic probation reported that their marriages were significantly happier than those students who were not on academic probation. The study concluded that those students on academic probation may have difficulty adjusting to being away from home and thus do not concentrate on their studies and do not do as well as those who are not as strongly identified with family. Perhaps students who have strong family ties have difficulty setting educational priorities that interfere with family needs (Fish et al. 1989).

Gold (1995) investigated the intergenerational approach to student retention and found that many outside forces influence college retention efforts. As college students move from their family of origin to the university family, they bring many messages about the way they will perform, what university life should be like, and a personalized
definition of success (Gold, 1995). Family interventions with college students include the identification of family themes or patterns. Some of these patterns include such things as the notion in some families that the oldest child carries the family burden for success, that the children sometimes take on the role of peacekeepers in the family, the idea that a college education is a privilege and should not be wasted, and the entrenched ideas of women not receiving family support if they select a nontraditional career. Exploration of family roles was used to assist students in developing new roles for themselves that would support them in their academic life.

A study conducted by Smittle (1992) at Grambling State University was designed to identify predictors of college success. Smittle found that the most significant indicator of college success was high school grade point average. Placement tests were the strongest predictors of college success with students who had multiple skills deficiencies. Smittle concluded that college success and retention could be predicted as early as grade 10 in high school using GPA.

Gerdes and Mallinckrodt (1994) conducted a longitudinal study of retention by using a survey to assess the emotional, social, and academic adjustment of college students. The survey results were used to compare those students who continued at the university and those who dropped out. After a review of the current literature, Gerdes et al. (1994) found that most research on retention involved academic achievement. The researchers purposed that a broader concept of student adjustment must be considered. These factors included areas such as motivation to learn, the ability of a student to actively address academic progress, a clear and focused direction and purpose, and
general adjustment to the college environment. The researchers used a survey completed by students prior to initial enrollment that assessed students' expectation concerning their college adjustment. A second survey was used to assess their actual adjustment process. The results indicated that students who stayed in college had a greater emotional and social adjustment than those students who left the system. They compared their data with the predictor of academic performance and found that emotional and social adjustment items on their survey predicted attrition more effectively than academic adjustment items (Gerdes et al. 1994).

The characteristics that identify students who may need special attention are varied. Some are less obvious than others. A different idea was set forth by Behrens (1995) when he looked at the level of social interest as a characteristic to be considered when working with at-risk students. Behren's study compared the levels of social interest among college students who voluntarily sought career counseling and those who were mandated to seek career counseling. The study was conducted at a major southwestern university and included 85 students. Approximately half the students involved in the study sought career counseling and selected college majors; the other half were students who were placed on academic probation and who were required to do career exploration with a counselor. The study was based on Adler's theory of high levels of social interest being instrumental in students' achieving career satisfaction (Behrens, 1995). Crandall's Social Interest Scale was used to measure student social interest. Behrens hypothesized that those students who voluntarily came for career counseling would have higher levels of social interest than those who were required to
do career counseling. Behrens (1995) found that those students who had higher scores on the social interest assessment tool were significantly more capable of formulating definite education and vocational goals. Results may indicate that students who have not formulated definite career goals may be found in higher numbers among those students who are placed on academic probation. The study suggests that assisting students to develop a high sense of social interest may be a crucial component in their academic performance. Behrens (1995) also suggested that special attention may be needed with those students who have undecided academic or career goals, those who are experiencing academic difficulties, those students between the ages of 18 and 25, and minority groups. Therefore, colleges that are developing programs for students who are having difficulty with academic performance may need to include helping students raise their level of social interest. Raising the level of social interest may enable students to set more realistic educational and career goals (Behrens, 1995).

What attributes make a difference between successful and unsuccessful college students who are on academic probation? Winn (1995) researched this question at Oklahoma State University. Winn used demographic information and additional data through the completion of the Revised Causal Dimension Scale (CDSII). The researcher found no significant differences between the successful and unsuccessful students. However, females were significantly more external in their attributes for failure than were unsuccessful males. This finding indicated that for females, as achievements increase, male-female differences decrease. Successful female attributes for success
were more stable and internal than were attributes for failure. Females showed a greater tendency toward self-evaluation and accommodation of new information (Winn, 1995).

Successful programs are based upon the students' willingness to change and their willingness to adjust their academic life to cause positive results. Topitzhofer (1995) studied college students on probation to ascertain how they were able to make lasting changes in their academic behavior. Topitzhofer used the 1984a Transtheoretical Model of Prochaska & DeClemente that involved changes in general coping processes across several stages of change. As predicted, the study found that the processes of change varied in frequency of use by stage of change. Subjects who were in the action stage scored higher than subjects in the contemplation stage in areas that involve willingness and readiness to change academic behavior. Topitzhofer concluded that the Transtheoretical Model has promise for describing and predicting academic behavior change. Each institution must take a close look at its own student body and decide which factors are contributing to the inadequate academic performance of students. Appropriate remediation and retention programs will have some common threads, but each will reflect the needs of the local institution (Topitzhofer, 1995).

Methods Used to Address Scholastic Probation and Retention

Post secondary institutions have had an increase in the number of applicants who are not academically prepared to meet the demands of college. In response to this phenomenon, some universities developed strict entrance standards that selected only the most talented applicants. As demand for higher education increased, the number of state institutions began to increase and with it the community college made its impact
on the availability of higher education. The seventies saw minorities and nontraditional students entering post secondary institutions in record numbers (Noel, Levitz, Saluri, & Associates, 1987). In response to these changes, some institutions began to establish different entrance requirements that were more inclusive of the students who were applying for admission by developing the "open admission" policy. Other institutions adopted or continued very strict entrance requirements. For some institutions, the type and scope of the students served by higher education changed drastically (Noel et al. 1987).

Community colleges with open admission policies face a tremendous challenge. These institutions are accepting some students who instead of finishing high school, may have received a GED (Graduate Equivalency Diploma), some with low ACT scores, others with low high school grade point averages, those who have graduated from high school with varying levels of academic preparation, and the special challenges presented by the nontraditional student. Many of the above stated reasons support the idea that institutions need a variety of programs to address retention issues (Noel et al. 1987).

Types of Programs

Much has been written about the importance of retaining students once they enter colleges and universities. Two basic types of programs are most often used to facilitate retention. One method is proactive and the other is reactive. The proactive activities center on effective recruiting of students by identifying and recruiting students who are more likely to succeed at that institution. To facilitate this process, post secondary
Institutions may consider offering an effective freshman year orientation, and other types of supportive activities that help students adjust to college, perform academically, and remain at their respective universities until their goals are met. The other method, the reactive method, involves developing programs that will remediate and support students who are, for a variety of reasons, in academic difficulty (Noel, Levitz, Saluri, & Associates, 1987).

One answer to the retention of students is to use a motivation-retention model. Based on Maslow's theory of hierarchy of needs, Catalano's (1995) Motivation-Retention Theory stated that a proactive model is needed where students' needs are assessed (as the student perceives needs). Catalano stated that many things considered as motivators may actually be neutral events. If a student perceives academic achievement to be good and that a college education is to be valued, then the student is more likely to stay in college to achieve this goal. Catalano (1985) proposed that his retention model can be used to assess and meet the needs of students.

Guenter (1994) at the Camosun College, Victoria, British Columbia, Canada identified various retention strategies as sorting, supporting, connecting and transforming. Sorting was interpreted as enrollment processes; supporting as all areas of services such as child care, financial aid etc.; connecting as areas such as student activities, peer programs, orientation advisers; and transforming activities as specially designed remedial and learning assistance programs. Guenter stated that “effective retention programs must involve strategies of sorting, supporting, connecting, and transforming to be truly effective” (p. 125).
New York's LaGuardia Community College was the setting for an experimental study undertaken by Tinto (1995). The intervention consisted of grouping students in Learning Communities (LC) so that they would be taking two or more classes together and providing each other with social and academic support. Tinto (1995) found that those students who participated in the LC program reported a more positive experience than the traditional students. The LC students also earned a higher GPA and earned more credit hours. Tinto reported that the persistence rate of the intervention group was only slightly higher than that of traditional students, but the intervention group was more likely to intend to continue their education. LC students reported that working together made their classes easier and that they enjoyed class more. Students were able to help each other see broad themes and connections across classes (Tinto, 1995).

Proactive Interventions

Enrollment Management. Recruiting students who have a best fit profile supports retention up front by recruiting and admitting students who are more likely to succeed at a particular college. Identifying these best fit students begins with a market analysis that identifies the demographic and academic characteristics of those students who have been successful at that institution (Noel, Levitz, Saluri & Associates, 1987). However, it is not always enough to know who is succeeding at a given institution. The investigation should also include characteristics of the unsuccessful students. Awareness of the characteristics associated with this group may be as valuable as knowing about the successful student (Noel, Levitz, Saluri, & Associates, 1987)
Open admission policies present special problems concerning best fit recruitment. Colleges that have open admission policies may not have the luxury of best fit selection. Some help may be available for these institutions by focusing their efforts on attracting students who are likely to remain once they are enrolled. Limited or varying degrees of ability, geographic accessibility to educational opportunities, socioeconomic background of students and expectations concerning academic performance add to the diverse challenges of open admissions recruiting (Noel et al. 1987).

Another phase of enrollment management included compilation of retention data for longitudinal tracking. Institutions need to know what is happening to students during their tenure at the institution to effectively plan interventions and assess progress (Noel et al. 1987).

A study conducted by Schmidt (1997) considered a philosophical and qualitative inquiry approach to college retention. Schmidt concluded that students are most successful when they attend a college which best fits their academic preparedness, where students are well adjusted, and where students are focused on an appropriate field of study. Educating students who do not fit the description reflected by the university will require major adjustments to instruction and support services.

Seidman (1995) stated that effective enrollment management should concentrate more on college characteristics affecting enrollment decision along with analyzing student variables instead of identifying prospects. Taking into account student characteristics and their demographic information assists the institution as they focus on courses, programming and interventions to support student retention.

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Coll and VonSeggern (1991) reported that knowing what the students' objective is when they come to college can be a great asset in assessing retention factors. Some students enter community colleges with objectives that do not include completion of a certificate or degree program. Graduation is not the only measure of success. Effective enrollment management should include assessment of students' stated objectives upon entry so that retention rates reflect successful accomplishment of students' goals (Coll et al. 1991).

Benson (1993) contended that if educational institutions are to survive during a time of declining enrollments, the entire campus must be involved in enrollment management. Institutional research needs to be actively involved by providing market analysis, student profiles and other information and assessments needed for effective enrollment management. Benson (1993) reported that this area should be supported by the functional areas of the campus such as financial aid, career planning and placement, learning assistance centers and other support facilities.

Jantzen (1991) observed that college enrollment management is moving toward the management of quality and size of the student body. Effective recruiting of the potentially successful student may require combining recruitment and retention and shifting additional resources toward the colleges' entry point.

Competition for students, funding problems, decreasing pool of students and students entering college with varying levels of preparation create special challenges for enrollment management. Clagett and Kerr (1993) discussed the need for enrollment managers to review the literature, develop a performance monitoring system, construct
longitudinal tracking files, identify student patterns, and conduct surveys and focus group research for effective competition in the college enrollment management environment.

Mohammadi (1996) designed a study to explain the retention and attrition in a two-year public community college. Mohammadi's study was designed to provide a longitudinal study on retention and attrition patterns to use for the improvement of retention rates and to provide at the state level, valid and reliable information for evaluating community college retention standards. The research was conducted at Patrick Henry Community College in Martinsville, Virginia. The college had an enrollment of 2,805, with three out of every four students enrolled for part-time study, and where female students (61%) outnumbered the males (Mohammadi, 1996). The research involved tracking students through the use of an Administrative Data Service. Student demographics, enrollment status, academic achievement information, curriculum studies, and academic levels were used to study the patterns of persisters and leavers.

Mohammadi (1996) concluded that students' goals for attending college are very strong predictors of retention, and that those who left college after one year had no intention of completing a degree program. The number of credit hours per semester, the number of credit hours completed, the overall GPA, and semester GPA of students are significant predictors of student retention. Mohammadi found that demographics and socioeconomic factors, along with open-access policies contribute to the attrition/retention rates at community colleges. Mohammadi concluded that because of
unique circumstances that exist at community colleges, state level evaluation of retention rates should focus on the institution and how they are improving their retention rates.

**Freshman Orientation and Mentoring.** Institutions choose to address the problem of student retention and academic probation by providing courses such as orientations/university studies, or other specially designed programs that are specifically developed to assist the student in learning about the institution, developing a sense of belonging and acquiring study strategies that will proactively attack the problem of academic probation and student retention (Upcraft, Gardner, & Associates, 1990).

A proactive intervention evaluated in a study done by Martino (1990) at Depaul University sought to retain new students through an intensive summer program called the Bridge. Students identified for this program were freshmen who were identified as high risk for drop out. A five-week intensive summer remedial program was required of 78 Bridge students. In addition, they were asked to participate in one of two nine-week fall quarter programs that emphasized study skills, or a program that also included self-control behaviors, and social support building. The results of the study showed that when compared with other entering first year students, the Bridge group obtained higher GPAs, and fewer of these students were placed on academic probation (Martino, 1990).

Freshman orientation classes have been around for a long time. However, new emphasis has been placed on the value of effective freshman orientation classes as another tool in the retention arena. Ellis (1994) offered the seventh edition of his book,
Becoming a Master Student to a waiting higher education community eager to use proven strategies that will assist in the retention of students.

Hamilton (1994) conducted a study at the Gainesville College in Georgia in which he studied the effects of improving academic performance by placing students in remedial classes, providing academic support services, providing counseling, and tracking these students long term. Hamilton compared the group of students who entered this program, referred to as the "Fresh Start Program (FS)," with a similar group of students who entered Gainesville College in 1990. Sixty-eight FS students with similar at-risk factors were compared with 233 students who started in the fall of 1990. The remedial classes were described as classes in basic areas of English, math and writing. The students were tracked for one academic year.

Results of the study showed that the two groups were very similar demographically. The only differences found were that the 1990 sample groups were 50% female and the FS group was 59% female. The FS group was found to have greater remedial needs than the 1990 comparison group. At the end of the study, the FS group had a higher mean GPA (2.22) than the 1990 comparison group (1.70) (Hamilton, 1994). Fewer of the FS students (19%) were candidates for academic probation than the 1990 comparison group (21%). Hamilton looked at the number of students in each group who subsequently enrolled in the next quarter and he found that 79% of the 1990 comparison group did enroll for the next quarter compared to 69% of the FS group. Hamilton noted that during the following quarter these percentages reversed. Sixty
percent of the FS students continued enrollment compared with 52% of the comparison group.

Hamilton (1994) concluded that at-risk students do benefit when special programs and support are provided. Hamilton commented that results were not as great as he had hoped, but that community colleges that continue to accept a diverse student population because of open admission policies, should provide programs of this sort to enable these students to earn college degrees.

An investigation of the role that noncognitive variables play in the prediction of student success in community colleges was conducted in 1994 by Abbott. The study sample consisted of a group of 307 freshman at Kent State University. The Reaction and Adaptation College Test (RACT) and a Freshman Questionnaire designed by the researcher were the instruments used to gather data. Abbott (1994) found that for community college students a positive relationship exists between the collective factors of the RACT and prediction of GPA. Some of the factors indicated were study strategies, test anxiety, academic attitude and motivation. There was also a positive predictive value between high school GPA and academic success (Abbott, 1994).

The University of South Florida was the setting for a longitudinal study conducted by Boudreau and Kromrey (1994). The study was designed to examine the relationship between the completion of a freshman orientation course and academic achievement, persistence and graduation rates. The course was a graded, two credit hour class with content emphasizing the development of skills and behaviors useful in helping students to achieve academically. Participant and nonparticipant groups were matched to control
for extraneous variables (Boudreau & Kromrey, 1994). The researchers found that those students who were participants in the freshman orientation course experienced higher academic achievement, and retention rates were significantly higher for a period of one to two years. No difference in graduation rates was found.

Brawer (1996) studied the characteristics of persisters and non persisters and intervention strategies specifically unique to community colleges. Brawer found through his research that community colleges use a variety of intervention strategies in their retention efforts. Some of the most widely used with the greatest impact on student achievement include: orientation programs, mentoring, and multiple strategy approaches. Each student presents unique circumstances and thus no design will meet all needs. Community colleges need to continue to develop intervention strategies to address the issue of retention rates (Brawer, 1996).

The University of Maryland, College Park, designed and implemented a one-session workshop during the 13th week of a 16-week semester for students who have concern about ending the semester on academic probation. The workshop was developed by the Counseling Center's Learning Assistance Service and included an assessment of tasks to be completed by the end of the semester, time needed to accomplish these tasks, a prioritized list to follow on a day-to-day basis, detailed daily schedules, a review of the SQ3R method of study, and work on organizing and reviewing lecture notes (Brunt & Hunt, 1994). Researchers concluded that the retention workshops were effective in reducing the number of students who were placed on academic probation. Brunt and Hunt reported that more than 60% of the students
attending the one-session workshop were registered for course work for at least four additional semesters or had graduated and were in good academic standing.

Long Beach City College in California developed a student-centered learning project designed to increase the success and retention rates of under represented students. Students and Teachers Achieving Results (STAR) provided linked courses designed to develop communication skills, utilize interdisciplinary curricula and cooperative learning, encourage faculty involvement, foster self-esteem, and offer academic and social support (Mackay, 1996). The treatment group was comprised of students who placed at the lowest level in reading and writing assessment processes. Students who participated in the STAR program significantly improved writing and reading skills and they were able to advance to higher course levels. Results of the study found improved retention, reduction in the number of under represented students on academic probation, increased course completion ratio, and elevated self-esteem (Mackay, 1996).

Mississippi State University was the site of a study conducted by Stewart (1997) designed to evaluate the effects of participation in a freshman level course, Learning Skills 1001 (LSK). Stewart pointed out that research supports courses of this nature for improved academic performance and retention. A control group was matched with a treatment group on variables that were known success predictors, (ACT score, gender, ethnicity, full and part-time status and age). Stewart used grades made in the LSK class to compare academic performance. The study used subsequent grade performance for participants and nonparticipants for the same sections and same course taught by the
same professor as measures of success. No difference was found between the participants and nonparticipants on the identified variable of a grade for the course (Stewart, 1997). This finding does not suggest that freshman seminar courses are ineffective. However, new ways of measuring success may need to be explored.

During the Fall semester of 1995, a study was conducted by Fields (1997) that looked at the differences in various factors of college retention for students who successfully completed all course work in a particular semester and those students who did not successfully complete at least one course during the same semester. Participants were studied in four groups. One group consisted of students enrolled in high success vocational programs with the second group made up of students enrolled in low success vocational programs. The third and fourth groups consisted of vocational students classified as non special population students and vocational students classified as special population students (Fields, 1997).

A survey was administered at the beginning of the semester designed to assess student-related retention factors and a survey designed to assess institution-related retention factors was administered near the end of the semester. Fields (1997) reported that retention factors were associated with a positive course outcome. The high success study group and the non special population study group were associated with institutional fit retention factors. Institutional fit and academic preparation were associated retention factors for the low success study group. Academic preparation and external environment were associated with retention factors for the successful students.
in the special population study group (Fields, 1997). Implications suggest those helping students to successfully complete course work affects retention.

**Academic Advising.** Academic advising is another proactive intervention used by post secondary institutions as a support mechanism to help students who may be identified as "at-risk" to persevere. Alabama A & M University identified intrusive advising as an avenue to tackle student retention issues with students on academic probation. Johnson (1986) stated that by identifying students' needs and aspirations and providing individual and group assistance, students can be helped to achieve their education goals. Intrusive advising was identified as appointment letters and phone calls initiated by advisors during the first week of the semester, documentation of all contacts made, a conference log, interview comments, survey response referrals made and opinion forms (Johnson, 1986). The researcher found that all the students who followed the program made satisfactory academic progress at the end of the semester. Forty percent of the students who chose not to participate received acceptable GPA's.

Another example of this type of program is one developed by Droge and Roundy (1992) that instituted a proactive study that involved using academic advising coupled with a basic public speaking course as a tool to address the retention of at-risk students. Droge and Roundy (1992) identified at-risk students as the students who scored low on placement tests, and those students who come to college with inadequate academic preparation. The program included the reading of a specified text that presented an argument on public discourse, the administration of a learning styles inventory, assignments that addressed argumentative discourse, and "intensive" advising (Droge &
Roundy, (1992). These researchers identified "intensive" advising as advisors that got actively involved in helping students manage their academic life. To avoid remedial class connotations, identified students were placed in regular speech classes. Twenty students were identified as at-risk and placed in this program. At the end of the semester, two students (10%) were placed on academic probation. Based on the predictive data, it was expected that 20% would have been on academic probation (Droge & Roundy, 1992). The mean GPA for the at-risk group was a 2.81, just slightly below the mean of the class as a whole that was 2.93 (Droge et al., 1992). Of the twenty students placed in the program in the fall semester of 1989, Droge and Roundy reported that 16 were still enrolled in the university and that this retention rate was greater than the overall retention rate of the other freshmen who enrolled at the same time. These researchers reported that the successful results of this pilot project led to the development of a multi section "Enriched" Freshman Advising program. They observed that the best teachers need to be identified and involved in the first-year level courses. The further concluded that effective academic advising involves more than just selection of classes. Droge et al. (1992) stated that educators need to look at the educational process as more than just liberal arts education. The researcher reported that addressing issues such as diversity involves more than recruitment, and that extended interventions should be available throughout the educational experience.

**Reactive Interventions**

**Scholastic Probation Programs.** An effective and often used method of reactive retention activity is to identify those students at the point of being placed on academic
probation and involve them in a program to remediate ineffective study strategies, give information needed to adjust time and effort, and assess and recommend changes in lifestyle (working too much, personal problems, financial needs, etc.). The proactive methods of helping facilitate change before a student is placed on scholastic drop is a more desirable intervention. Many post secondary institutions are well aware of the need to intervene with students at this level, and have developed programs to address academic probation (Upcraft, Gardner, & Associates, 1990). This section will discuss some reactive types of interventions developed to address the issue of academic probation and retention.

Interventions addressing academic probation often include some component of study skills. The need for inclusion of a study skills component in special programs has been evident in the literature for some time. Durkee (1967) conducted a study at the University of Southern Mississippi to determine the effectiveness of a short-term study skills course on students who were on academic probation. Four groups of volunteer students on academic probation were used in the study. Two groups were used as control groups. Twenty-three students were assigned to one control group, and the other control group (24 students) was randomly selected to control for the Hawthorne effect. The group that served as the control group for the Hawthorne effect was pre and post tested, but received no treatment. The two experimental groups participated in a two-hour study skills class for five weeks. Experimental groups were pre and post tested with the College Inventory of Academic Adjustment.
At the conclusion of the study, Durkee (1967) reported that the results did not show a significant difference among the groups on GPA or on the post test with the College Inventory of Academic Adjustment. Durkee (1967) also found no significant differences due to the Hawthorne effect. Some would conclude that the study skills class was not effective in helping to prepare students for academic success. A study may not show a statistical significant difference for a variety of reasons. The experimental group may have had some unique characteristics. The possibility exists that the study skills class may not have been well organized or may not have included relevant information. Although the outcome did not result in a statistical significant difference, significant progress was made by some students. Therefore, all study skills programs used to remediate academic probation students should not be dismissed as ineffective. For every study where these types of interventions did not find significant differences, many other studies found significant differences after similar interventions (Fields, 1995, Santa, 1979; and VanShelhamer & Water, 1988)

How does being placed on academic probation affect students? Does the academic action have an affect on the way students perform the semester following placement on academic probation? Santa (1981) conducted a study at the Bronx Community College in New York to answer these questions. The academic performance of 18 males and 27 females who had recently been placed on academic probation was compared with a non probation group of 30 males and 30 females who had GPA's of exactly 2.00. Santa reported that those students who were on academic probation had higher semester GPA's than the non probation group. In subsequent semesters, females in the academic
probation group continued to have higher GPA's and males had higher GPA's for an additional semester. Academic probation may not be a nonproductive experience for all students. Some students do not make the necessary adjustments for study time, adjust work schedules or realistically assess their academic progress until something as eventful as being placed on academic probation causes them to reassess their academic progress (Santa, 1981).

A recent study done by Manalo (1996) concerning the effect of a special intervention course designed to support those students who were on academic probation found that students on academic probation achieved better than those students on probation who did not take the course. The course included a four-day intensive instruction package that included instruction in time management, study habits, test preparation, test-taking, memory, concentration, and writing skills.

Some may assume that students who find themselves on academic probation are those with low academic ability. However, some students who find themselves in academic difficulty may be students who have the potential to perform well academically. Green (1976) designed a study to examine those students who were placed on academic probation, but who had high academic potential. Green identified from a review of literature that study behavior, vocational exploration, and goal setting was relevant areas worth investigating. The sample for this study included 22 volunteer students who had been predicted to earn a 4.2 GPA on an A=6.0 scale, but were on academic probation during the 1976 spring semester. Subjects were assigned to three treatment groups. All three treatment groups met for five 2-hour sessions. Group A
received 10 hours of study skills advice; Group B received the same study skills advice with the addition of behavioral and self-control technique instruction; and Group C received the same instruction as Group B with added vocational exploration and goal setting. Green (1976) found no statistical significant difference among the treatment conditions. However, significant improvement on grades and index points was noted.

Interventions designed to improve academic performance and ultimately GPA appears to have a positive effect whether the programs are designed for students who have indicators that predict good academic performance, special populations, or those students who are inadequately prepared for college (Green, 1976).

The difficulty of getting students to participate in special programs designed to assist them with their academic endeavors is a common problem among universities. Salvaging the student on academic probation is important enough to warrant a program designed by Sappington (1980) in which students were paid to participate in a project designed to improve grades. The results of this study concluded that those students who had a high degree of self-control made significant academic improvement, but others in the study did not make improvement. Paying students to participate may not be as important as having a high degree of self-control. Internal locus of control may be a factor to consider when assessing student progress.

A related look at locus of control issues was the focus of a study done by Gaines (1996) that compared locus of control scores among students placed on academic probation and students participating in the university scholars program. The researcher used the 1981 Levenson Locus of Control Scales and a demographic questionnaire to...
collect data. Gaines found that subjects did not differ on the Internality (I) and Power Others (PO) Scales. A significant difference was found in the Chance (C) Scale.

A study conducted by Booth (1993) was developed to evaluate increasingly varied and personal outreach efforts used to encourage students on academic probation to enroll in the Academic Intervention Program (AIP). Outreach activities consisted of personal letters, phone calls, and mass media messages. Three groups received varying combinations of the outreach activities. Booth found no significant results among the various outreach activity combinations. Limitations of the instrumentation used and design problems were suggested as limiting factors for finding significance. Information such as self-reported GPA, ethnicity, and age status (traditional and nontraditional age students) did not differ (Booth, 1993).

The Bronx Community College in New York was the setting for a study conducted by Donnangelo (1978) to evaluate the effects of a counseling program on the academic suspension rate of students who were on academic probation. The study developed out of a concern for the number of students who were on academic probation that eventually were placed on scholastic drop. Focus of the study was to offer special counseling sessions to students on academic probation. The program was designed to include a large group meeting at which retention standards were presented and discussed. Students were required to attend smaller group meetings with counselors where they were encouraged to discuss factors that interfered with their academic progress. The results did not find a statistically significant difference at the .05 level in the number of students who were able to improve their academic standards to keep from
being placed on academic suspension. While the counseling program did not significantly reduce the number of students placed on academic suspension, Donnangelo noted a decrease in the suspension rate of 2% (61%) ($N=1,160$) of 1,903 students in the previous semester compared with 59% ($N=1,325$) of 2,243 students during the program.

A follow up of his 1978 study, Donnangelo (1979) investigated the effect of a seven-week course on student retention. Donnangelo reported that a diverse population that included students who were economically, socially, and academically disadvantaged were further threatened by the stiffening of academic standards at the Bronx Community College in New York. In anticipation of students being suspended and placed on academic probation, the college decided to begin a new seven-week course to help students remain in college. The results of the study found no significant relationship existed between the academic achievement of the students who participated in the program that semester and those who did not participate. The program was evaluated for revisions that may be more effective in reaching retention goals.

Miami-Dade Community College was the setting for a study done by Mackin (1979) to evaluate the effectiveness of counseling programs that included a series of one-credit workshops covering areas such as time and energy management, life/work planning, and effective decision making. Workshops were supported by individual counseling sessions. Mackin reported that the students who participated in the program achieved higher GPA's and higher credits attempted/earned ratios than those who did not participate. No one intervention had a more positive result than the others.
interventions were found to have a positive effect on GPA and credits attempted/earned ratios, and there were no subgroup difference found, i.e. age, ethnicity.

Santa (1979) conducted work in the area of academic probation with another project that looked at peer-mediated self-management contracts as a program designed to retain and improve the survival and study skills of students on academic probation. The study was designed with two control groups and two treatment groups. Treatment group one was referred to as the Probationary Workshop Program and was designed to include academic survival counseling, study skills advice, and stimulus control group in which treatments were delivered through a self-contained class setting. The second treatment group was called Operation Second Chance and consisted of academic survival counseling, study skills advice, stimulus control, and peer-mediated self contracting group. Treatment for this group was delivered through structured contracts with student facilitators.

Santa (1979) found that both treatment groups did better in improved grade point averages and the number of credit hours earned as compared with the control groups. However, this improvement was not significant regarding semester GPA. No significant difference was found between the two treatment groups. Santa concluded that counseling does have a positive effect on academic performance. The positive result of student efficiency was difficult to measure. Perhaps part of the answer can be found in the idea that students who seek counseling and are willing to be involved in treatment groups suggests that motivation to improve may be a contributing factor. Santa suggests
that it may not be enough for counselors to wait for students to seek help, but that direct
contact may be necessary to insure that every student has a chance for academic success.

Altmaier, Rapaport, and Seeman (1983) found that being placed on academic
probation had a negative impact on students' self-esteem and a negative impact on their
relationships with others. A second issue identified was that students lacked an
awareness of support services available to them on campus.

In the mid 1980's the University of Arkansas developed a comprehensive program
designed to address the issue of academic probation called "An Academic Counseling
Model" (Rogers, 1984). This model was based on a mandatory probation orientation
held during the first three weeks of each regular semester and once during the summer.
During these sessions students who were not doing well academically were provided
information, services that were available to them was introduced, and they were given
information concerning the probationary program. Students had the option of signing up
for the special program or continuing on their own. Students who signed into the
Probation Program voluntarily were assigned a Probation Advisor. After students signed
up for the program, a series of interviews with a Probation Advisor was held. These
sessions included an initial interview, bimonthly academic monitoring conferences,
transcript reviews, and a final interview. The bimonthly academic monitoring sessions
concentrated on helping students develop personal self-responsibility and problem
solving skills (Rogers, 1984). Rogers reported that 39% (n=939) of the students who
were not included in the study were retained. Sixty percent (n=198) of those students
who attended the probation orientation were retained. Seventy-one percent (n=208) of
those students who made contracts and met them were retained. The fact that students either attended the probation orientation or contracted for additional services had a positive impact on the number of students retained.

The way students are contacted concerning the setting and keeping of appointments could have implications in developing retention programs. Southern Illinois University at Carbondale was the setting for a study conducted by Cuvo, Freeman, Canavin, and Bryson (1986) to consider the conditions of appointment compliance for students on academic probation. Questions they attempted to answer involved which method is more effective in facilitating students to keep their appointments—fixed appointments versus open appointments, and the content of letters—fixed letters or open letters. The study found that students with fixed appointments were more likely to keep their appointments than the open appointment design. Sending letters to set appointments had two conditions, one letter involved fixed days and times for student appointments, and the other letter (open) involved setting a day, but left the time open for students to select. The results showed that setting exact days and times met with greater student compliance in keeping appointments. These results indicate that those who design retention programs for students on academic probation need to set fixed appointments with students as opposed to encouraging students to make appointments to see counselors (Cuvo et al. 1986).

Rutgers State University was the setting for a study conducted by Newport (1989) designed to evaluate the effectiveness of an academic problem-solving program for students on academic probation and those applying for readmission. Participants were
assessed for the types of personal and academic problems that interfered with their academic achievement. The researcher also assessed participants' familiarity and use of university resources.

Newport (1989) found that the program was effective in helping students identify factors that contributed to their academic problems and that students increased their awareness and utilization of university resources. While Newport found no significant change in GPA for the semester the program was used, an increase was noted in the mean GPA of those who participated.

St. Frances College, a small liberal arts college in Pennsylvania, was the setting for an intervention program for students at all academic levels who were not meeting the university guidelines for good academic standing. Foreman, Wilkie, and Keilen, (1990) defined their program as Study Acceleration: Gaining Excellence (SAGE). Components of the program included; meeting six hours a week for structured study supervised by college faculty or staff called coaches, peer tutoring that was optional for students, twice a week counseling sessions that focused on academic issues, and attending study skill mini seminars held twice a week (Foreman et al 1990). Because of these interventions, Foreman et al. reported that students improved their cumulative GPA's with approximately one-third achieving good academic standing.

A study conducted at William Rainey Harper College by Lucas (1991) was designed to evaluate a new academic probation program. Students who were involved in the program had GPA's below 2.0 (4.0 scale) and had been placed on academic warning the previous semester. Some of these students on academic warning improved their GPA's.
grades and were removed from academic probation. Those students who did not improve their GPA's were required to attend special-oriented strategies (interventions) and were restricted to 13 credit hours. Interventions included areas such as; clarification of the probation system, calculating GPA, identification of factors leading to a low GPA, improving study habits, and learning to focus and prioritize goals.

Lucas (1991) found that of the 278 students involved in the study, 73% returned the following spring semester. A telephone survey was used to evaluate the effectiveness of the intervention program. Lucas reported that most of the students reported being more knowledgeable concerning the identification of factors leading to a low GPA and were better prepared to develop a plan to improve their GPA.

Wilkie's (1996) review of a 1990 paper by Foreman on ways to reverse the academic probation dilemma wrote from the position that most academic probation interventions are directed at areas such as study skills, and workshops and seminars that are cognitive in nature. Foreman's study was conducted at Shippensburg University and focused on a group approach called the Study Enhancement Group (SEG). The study group activities were directed toward the affective domain dealing with the emotions associated with academic performance. The program approach was based on the assumption that addressing the issue of self-esteem empowered students to take charge of their academic performance. Results of the data collected revealed that students who attended the SEG group had a higher overall GPA (regained good academic standing for at least the next semester) than those who did not attend SEG sessions (Wilkie, 1996).
Beck (1996) conducted research to identify factors that lead to academic success after scholastic probation. Focusing on a review of transcripts, students were identified for the study as having completed all units attempted their last semester, had completed the semester with a 2.0 or greater GPA, and had attained at least a 2.0 GPA in each subject taken that semester. A questionnaire was administered to participants and a random selection of a group was identified for in-dept interviews.

A positive correlation was found for the use of college support services during students' academic difficulties. The use of the library and counseling services were noteworthy as positive contributors to academic success. Themes identified from the use of the questionnaire were the importance of having clear goals, emotional and intellectual determination, support from both family and employers, and personal contact with significant college personnel, i.e. faculties and counselors. Beck (1996) pointed out that as economic pressures build it is often necessary to move to larger classes and incorporate more electronic classes. Beck’s research points to the fact that it is critically important that community college leaders keep in mind that one of the keys to keeping personal interaction is student contact and use of support services.

A study conducted by Freedman (1996) was designed to examine the effects of a multi component group intervention for undergraduates who had been placed on academic probation. Based on a 1993 study on Tinto’s theory of student attrition and a 1986 study on Bandura’s self-efficacy, Freedman hypothesized that student attrition would be affected through increased self-efficacy. Freedman (1996) found that self-efficacy was increased and that this increase was a significant predictor of GPA.
Freedman also found a greater increase in self-efficacy in those who volunteered for the program compared with those who did not volunteer.

A three-stage model of academic probation purposed by Kelley (1996) included areas of cognitive, affective, behavioral, and environmental factors. Kelley (1996) addressed factors inhibiting student performance and found that students' causal ascriptions for probation was predictive of future performance and self-concept.

Research supports interventions that target weak academic areas of at-risk students as successful strategies. Coleman and Freeman (1996) conducted a study to determine how a structured group intervention affected academically at-risk students. A structured group intervention involving the academic achievement of 78 males and 71 female students found that the students participating in the study were removed from probation status at significantly higher rates and achieved higher GPA’s than the control group (Coleman, & Freeman, 1996).

**Scholastic Drop and Readmission Programs.** Providing support for student success before they ever get on academic probation is a positive proactive intervention. Intervening at the point when the student's progress reveals that a problem exists is probably more desirable than waiting until a student is placed on scholastic drop. Some students do not respond to interventions as long as they are not faced with scholastic drop. Unrealistic expectations concerning academic performance contributes to this view. In addition, students sometime have extenuating circumstances that interfere with their learning activities for short periods. One semester of major problems that impact grades may be devastating to a student. Therefore, post secondary institutions may
consider including effective retention programs that address academic drop issues (Noel, Levitz, Saluri, & Associates, 1987).

**Predictors of Success.** In 1968, Planisek of Kent State University in Ohio conducted research to investigate guidelines that could be utilized by the college deans to make appropriate decisions concerning which students who had been academically dismissed had the highest probability of being successful upon readmittance. Planisek used academic characteristics that correlated with academic performance to identify which characteristics were most predictive. Planisek (1968) found that GPA had a .05 level or better significance among all the categories of variables. In addition, Planisek found that the nonability correlates from the 16 PF with GPA and the Activities Index could have theoretical implications for counseling the low achievers. Students do better when they are involved and when they have clear understanding of their abilities and clear career goals.

In 1978, Phipps conducted an experiment to determine if a readmission policy at Salisbury State College could be successful in helping students complete their academic programs. Students who had been academically dismissed were allowed to petition for readmission for the semester following their academic dismissal. Students were required to meet with the academic counselors and write a letter to the dean explaining how they had resolved problems that contributed to their academic failures. Students were identified for readmission pending adequate facilities at the college to accommodate the readmitted students, and the assessment of their admission criteria suggested that the student had the potential for being successful. Phipps found that readmitted students
identified as probable candidates for success were able to continue college and complete their education. Phipps concluded that there was a definite advantage to a flexible readmission program to determine who is eligible to return to the institution.

Post secondary institutions have addressed the problems of students on academic probation and academic dismissal through a variety of programs designed to identify predictive variables used to readmit students. Russell (1984) conducted a study of the student data files to determine which students should be dismissed and which students should be allowed to continue on academic probation. Russell conducted this study during the spring semester of 1980 at the College of Professional Studies at Northern Illinois University to determine if a group of selected variables could predict which students to allow to continue on academic probation and which one(s) should receive academic dismissal. Sixty students were chosen for inclusion in the study. Selection was based on GPA and honor point deficiencies. Twenty-six independent variables were selected from the students' files and discriminant analysis was performed. Russell reported that students had a higher GPA during the semester following the student being placed on probation. Early advisement during the semester, older age, a slightly lower first semester GPA, and taking more credit hours over in classes where the student had received a grade of "D" were the identified predictors of success (Russell, 1984).

Another look at the information through a simpler two-variable combination identified a deficiency of eight or less honor points and a semester GPA of at least 2.00 during the semester the student was placed on probation as the two strongest predictors of student success. This study points strongly to the idea that students who can obtain a
GPA of at least 2.00 during the semester the student was placed on probation are more likely to have continued academic success (Russell, 1984).

A similar study conducted by Hall (1994) to investigate the validity of six predictors of academic success after dismissal and reentry found that the only significant predictors of future academic success were GPA factors. Throughout many studies reviewed, the identified predictors always include GPA as a highly significant predictor of whether an academically dismissed student will succeed upon reentry. The identification of the importance of GPA is supported by earlier research done in 1968 by Bierbaum and Planisek (1972) that also found the critical predictor of academic success was the GPA index. Bierbaum and Planisek moved the expected GPA to a 2.20 as a predictive index at Kent State University.

Factors influencing the academic success of adult college students after initial academic suspension can be varied. Some experiences during the suspension time appear to encourage an improved academic performance after returning to college. In 1992, Austin designed a study to examine what factors contributed to academic success after students were readmitted after academic suspension. Two data forms were used by the researcher to collect information from returning students. The focus of the data analysis was to determine the factors that promoted academic success. The results indicated that successful students reported successful participation in academic learning activities. Successful students also reported strong support from family and friends, and were able to achieve a balance between school and their other adult obligations (Austin, 1992).
The Bronx Community College in New York, has been the site of several studies concerning academic probation and retention (Santa, 1979, 1981, 1996). One of the studies that has significance for this research project concerns the characteristics of successful students readmitted following academic suspension. Santa (1996) studied 86 scholastically suspended students who applied for readmission. Fifty-three percent (29) of these students were female and 31 percent (18) were males. Variables used in the study were scores on the City University of New York placement tests, Maudsley Personality Inventory, and biographical data items (Santa, 1996). Findings revealed that students' past academic performance was unrelated to performance for the re-entry semester.

Factors identified by Santa (1996) as having a positive relationship on academic outcomes were: being an only or first born child, being married, and students reporting that they have financial concerns. In addition, students who expressed problems with instructors, teaching methods, and counseling were more likely to succeed upon re-entry.

Santa (1996) concluded that past academic performance seemed unrelated to re-entry performance and that overall, a desire or incentive to improve was important to students achieving passing grades. These findings have implications for offering special programs for students whose past performance has not produced satisfactory results. The fact that a student has been academically suspended and has applied for readmission supports the assumption that these students may have decided to put forth the effort, rearrange schedules, and now have the incentive to improve their academic
standing. Therefore, offering special programs to remediate and retain students at the point of first time scholastic drop is an appropriate and sound policy (Santa, 1996).

When post secondary institutions consider readmitting students who have been academically dismissed they should consider the factors that will lead to student success. The college of social science majors at Florida State University was the setting for a study conducted by Kinloch, Frost, and MacKay (1993). The study was designed to assess the effectiveness of readmission conditions for approximately 500 social science majors who had been dismissed the previous semester. The study focused on background and academic traits of the identified students. Analysis was further supplemented by using data from approximately 7,800 social science majors at the same institution.

Readmission conditions consisted of (a) a student attending a community college to obtain an associate degree, resulting in an improved GPA; (b) checking accuracy of grades or completing incomplete course work; (c) changing major; (d) taking correspondence courses until GPA is improved; (e) repeating courses using the forgiveness policy and improving the specific grade; (f) improving GPA to good standing (2.0) or be permanently dismissed; and (g) retroactively withdrawing from courses using documented reasons (Kinloch, Frost, and MacKay, 1993). Demographics used to compare students included race, gender, birth decade, class, transfer status, high school GPA, and major.

Kinloch et al. (1993) concluded that the data indicated that at-risk social science students tended more often to be Whites, African-Americans, Hispanics, males, juniors,
transfer students, those in their mid-20's, those with interdisciplinary and limited-access majors, and those with low high school GPAs. Gender, quality point deficit, and certain readmission conditions were more closely associated with academic success. The researchers found that a variety of background and academic traits were associated with academic failure, but readmission factors are associated with such factors to a far lesser extent. Three important counseling implications were suggested: (1) special attention should be given to the at-risk student before the dismissal stage, (2) specific attention to students' understanding of a quality point deficit that must be addressed individually, and (3) readmission policies such as grade forgiveness or retroactive withdrawal did not seem effective and should be used cautiously. Further study is needed to decide the relationship of background information on academic performance (Kinloch et al. 1993).

Special Programs for Scholastically Dismissed Students. Working with students who have been academically dismissed is not a new phenomenon. When compared with other types of proactive and reactive programs such as those designed for students on academic probation, few intervention programs target the dismissible or dismissed student population. Some might question the value of permitting students to continue attending college when they are not performing well academically. Arnold (1970) found that students on academic probation who were close to a 2.0 and were allowed to continue in school tended to be successful students after being readmitted.

Students who find themselves involuntarily dropped from college are not always lacking in intellectual competence or lacking in skills required to successfully meet the demands of college work. Some students who find themselves on academic dismissal...
are there as a result of a lack of study skills and habits required for college work (Noel, Levitz, Saluri, & Associates, 1987). Therefore, programs designed to address the issue of improvement of study skills are effective interventions to assist these students to persist. Interventions are particularly applicable where academically underprepared students are involved.

Green River Community College questioned their process of placing students on academic suspension and whether this process motivates or discourages students (Aubert, 1979). The study was designed to test the hypotheses that students who were placed on academic suspension who were required to apply for reinstatement would perform better than those who were simply notified of their probationary status. A computer failure led to a number of students not being notified of their academic probation status. This group was used as the control group. The other students who were notified of their placement on academic suspension were required to go through a reinstatement process. The reinstatement process consisted of an application that asked questions relating to areas that might interfere with academic performance. Students were asked to fill out the application and sign an agreement that they would be more responsible for their scholastic progress (Aubert, 1979). The researcher compared the control and treatment groups with respect to persistence, classes attempted, credits attempted, credits earned, and GPA. No statistical difference was found between the control group of students and the students who went through the reinstatement process (Aubert, 1979). The study concluded that the reinstatement procedure did not significantly improve student performance (Aubert, 1979). From this study, it appears
that a more intrusive and comprehensive program is needed to remediate and retain students at this crucial point in their college careers.

Other supportive data concerning the need to offer remediation and/or special intervention programming for students on academic probation is reported by Greer (1982). After examining educational, financial, social and personal factors that may contribute to students having academic difficulty, Greer concluded that special programs have been shown to be effective in lessening attrition. Greer found particular relevance in adjustment to college work.

Schultz (1989) conducted a study at Oklahoma State University to determine the differences between academically successful and unsuccessful students in an intrusive academic advising program. Three hundred thirty-four students who had been academically suspended and readmitted to the university were included in the study. Program participants were measured for self-esteem, study habits, and study program. Participating students were also asked to list predominant causes of their academic difficulty. After the intrusive academic advising program, Schultz (1989) reported that 48.5% of the students in the program obtained a 2.0 grade point average or better. Schultz (1989) further noted that students who began the program with a higher cumulative grade-point average did considerably better than those with a lower cumulative grade-point average. No effect was noted for increased self-esteem or study attitudes as a result of being in the program. Most students reported that a lack of readiness for school and a lack of effective study habits were the primary causes for their academic performance (Schultz, 1989).
The Counseling Center and Student Development at the University of Delaware looked at the influence counseling sessions had on students who were considering dropping out of college. Bishop and Walker (1990) found that of the 187 students included in their study, 80.2% were still enrolled as full-time students a year after initial contact with the counseling center. The study provides support that students who are at risk for academic probation may continue as persisters as a result of their counseling experience.

Snowden (1991) conducted a study at the City University of New York to determine if an intervention program had a positive effect on the academic performance of African-American and Caribbean-American students who were readmitted to the university with academic probationary status. The research further investigated the effect that students' level of self-esteem and self-efficacy and the effect negative life events may have had on students' academic performance. The investigator selected intrusive counseling sessions along with individualized reorientation and behavioral academic contracting as avenues of interventions. A total of 105 students were readmitted on academic probation during the period the study was conducted. The comparison (control) group consisted of 47 students who were readmitted for the fall of 1988. A study group (treatment group) included 58 students readmitted during the spring of 1989.

The study group that received the intervention program showed a statistically significant relationship between their ability to persist additional semesters and improved GPA. Snowden (1991) reported that the other variables, negative life events,
not having a midterm counseling session and low self-esteem were not statistically related to academic performance.

Vukovich (1982) designed a probationary forum approach to retain academically dismissible students at the University of Akron. This study was designed to investigate the effect of a group guidance approach on the retention and grade point averages of a group of freshman and sophomore students who were placed on academic probation. These students were in the academic dismissible category and were selected to investigate the possibility of reducing attrition rates and improving the chances that they would continue to persist. The study was conducted at a large urban college where 232 students chose to continue in this special program. Statistical analysis of the data revealed no statistically significant difference between the cumulative GPA of the experimental group and the control group after the experimental semester. Other examination of the groups found that 81.65% of the experimental group was academically eligible to continue at the university for the following term; 77.24% of the control group was eligible to continue. Of those students eligible to continue the following semester, 73% of the treatment group did actually enroll, with only 65% of those eligible to continue from the control group enrolled. Though statistical significance was not found, positive academic outcomes were evident.

Cuyahoga Community College (CCC), Western Campus in Kansas City, Kansas was the setting for a study conducted by Akridge and Ross (1987) to determine the effectiveness of a success program that involved counseling, caring, and campus involvement. The study included those students who were academically underprepared,
those on academic probation, and those students who were academically dismissed. The purpose of the study was to effect positive changes in their academic records and support efficacy in their personal lives. Akridge et al. (1987) reported that the objectives of the study were to monitor students' grades so that students who were in danger of academic probation could be identified early, to assist those students who were on academic dismissal with readmission procedures and limitations of course loads, to develop a college study skills course, and a grade enhancement program that would allow students to petition for the removal of up to 15 credit hours of "F" from their grade point averages. The terms of students' readmission included a limit of seven credit hours. The participants were required to attain a "C" average for that semester and subsequent semesters. Students continued the seven-credit-hour limit until they were off academic probation and their cumulative GPA was 2.0 or better. Students were allowed to use the option of grade forgiveness only once with no guarantee that another university or employer would ignore the forgiven grades (Akridge et al. 1987). He stated that this program is inclusive in that it is in place and available from the time of the student's initial contact through graduation. Akridge reported that CCC's Western Campus Success Program has proven to strongly influence attracting and retaining students.

In a study conducted at Montana State University, VanShelhamer and Water (1988) designed an experimental 40 hour academic achievement seminar to assist students who were on academic suspension for the first time. The seminar covered areas of study skills, college adjustment issues, and other supportive academically related
topics. VanShelhamer and Water reported that the research project not only added value to the university’s financial picture, but allowed students the opportunity to get the help they needed to assist them with their college program without a disruption in attendance. One hundred eighty students were suspended for the first time in the spring quarter when the study began (VanShelhamer & Water, 1988). Fifty-five of the 180 students chose to participate. All 55 students completed the seminar with 49 of those registered for the following term (VanShelhamer & Water, 1988). A little over 57% finished the seminar with a 2.0 or better GPA.

Using study skills strategies is an effective tool to improve performance of students on academic probation. Lipsky and Ender (1990) found that a one semester study skills course had a statistically significant effect on an improved GPA, academic hours attempted and academic hours earned. Lipsky et al. (1990) followed the 354 college freshmen involved in the study and found that differences existed between the treatment and control groups as long as one and two years after the intervention.

Fields (1995) of Louisiana State University (LSU) at Baton Rouge, Louisiana developed a program to retain and retrain ineligible undergraduate students. Under the direction of Fields, a program referred to as MARS (Monitoring At Risk Students) was developed by LSU’s Junior Division. This program was designed to provide support for those students who were on scholastic warning, scholastic probation, and for undecided majors who had earned 45 hours of college credit (Fields, 1995). Fields reported that even with the efforts expended to assist these students to get off of academic probation, some found themselves on scholastic drop. The retain and retrain program was
developed to assist the scholastic drop students with the transition back to satisfactory academic standing. The program referred to as the Scholastic Drop Summer Only (SDSU) is offered in the summer to students on scholastic drop who have attempted less than 60 hours, can improve their GPA to a 2.0, enroll in a College Level Study Skills course (EDCI 1001), and agree to twice weekly Progress Sessions (Fields, 1995). Students selected to participate in the program were capable of registering for and satisfactorily completing course work that would allow them to make significant progress toward getting off academic probation. Fields reported that 294 students on scholastic drop have participated in the summer program and addressed eligible academic status. Of the 294 students who enrolled in the program, 67% were eligible to continue their enrollment the following semester.

Various summer programs have been developed to address freshmen issues such as creating a sense of community, orientation to the university, and teaching remedial classes. Other summer programs are specifically designed to address the needs of the student who is on academic probation. These programs usually deal with study skills, how to calculate grade point average, time management, use of support services, etc. Summer programs have also been used as avenues to address the special needs of the students who are academically dismissed. Boyd (1996) conducted a study at the University of Maryland designed to test the effectiveness of a summer program intervention to address retention. The study's sample size was 133 participants who were academically dismissed students. Comparison population consisted of 533 students who did not participate in the summer program, but who were academically dismissed and
who were approved to continue the following fall semester. The summer program was conducted through 14 sessions over a 4-week period. The sessions focused on teaching skills necessary for academic success (Boyd, 1996). Seventy-four percent (98) of the students who participated in the summer program were approved for reinstatement for the fall semester. Persistence rates two years after the program found that 64% of the treatment group was still enrolled compared with 49% of the control group (Boyd, 1996).

Kern, Fagley and Miller (1998) conducted a study on a rural university campus designed to assess how learning, study, and test-taking strategies, students’ attitudes about college, and ACT scores, are linked to college GPA and to retention. Participants were volunteer undergraduates in a career planning and development course at a southwestern state university. At the beginning of the semester, students were administered the Learning and Study Strategies Inventory (LASSI), the Gibb Experimental Test of Testwiseness (GIBB), and the short form of the Intellectual Achievement Responsibility Questionnaire (IARQ). The LASSI was used to assess learning and study skills, the GIBB was used to measure students’ use of secondary cues in multiple-choice test items, and the IARQ was used to measure students’ beliefs about their control and responsibility for their academic success and failure (Kern et al., 1998). Results of the data analysis showed that GPA had a direct effect on attrition. Kern et al. stated that GPA and retention needs to be considered as distinct outcomes. The researchers reported that learning and study skills are important in helping students achieve a satisfactory GPA, but that attrition is more strongly correlated with
motivational self-rating. Important implications from the research stated that positive results are possible when students are helped to improve their study strategies and motivation for learning and that counselors can affect these strategies and then affect the GPA on attrition (Kern et al. 1998).

Summary

The review of literature supports the notion that multiple interventions that are uniquely designed to meet the needs of students can have a positive effect on academic performance and retention. Designing programs to assist students from the time they enter college until they graduate are effective strategies used to improve academic performance and increase retention. Recruiting the student who is most likely to succeed at any given institution is an integral part of the mix (Clagett & Kerr, 1994; Coll & VonSeggern, 1991; Jantzen, 1993; Noel, Levitz, Saluri, & Associates, 1987; Seidman, 1995). Many post secondary institutions do not have the luxury of having an unlimited number of applicants, cannot afford the luxury of selected enrollment and must use creative marketing and effective programming to attract and retain students. The types of institutions that are most likely to have difficulty in this area are those that have open admissions.

Developing effective programs that identify at-risk students and instituting programs that will assist in helping the student find academic success is desirable. Freshmen orientation classes, remedial or developmental classes, enrollment management, special early start programs and mentoring are just a few of the effective strategies that address this area for open admissions institutions.
The literature identified characteristics that are often found among those who get into academic difficulty. Some of the most common characteristics identified were: low ACT/SAT scores, low high school GPA, first generation college students, working too many hours, failure to set appropriate priorities, and failure to realistically assess progress (Altmaier, Rapaport, & Seeman, 1983; Brooks, 1991; Heaney, 1996; Smittle, 1992). Identifying at risk student behavior is the first step in developing programs to address academic difficulties.

Once a student is placed on academic probation institutions have developed programs that address the issues surrounding academic probation. This is a desirable place to intervene. Students who are helped at this point may continue their education uninterrupted and persevere to make progress with a support program in place to sustain their efforts. For some students, being placed on academic probation causes them to reassess the areas that are interfering with their academic progress and take appropriate action. Others need special attention in areas such as study skills, counseling, and special advising.

Two elements stand out in the literature as effective interventions supporting student success. The first includes programs designed to remediate and retain students that often include a study skills course or seminar (Green, 1976; Kern, Fagley & Miller, 1998; Lucas, 1991; Manalo, 1996; Santa, 1996; Wilkie, 1996). The assumptions for this intervention is supported in the literature as an effective method of assuring that students have the study skills necessary for successful academic performance.
The second intervention often mentioned in the literature includes some type of counseling support (Beck, 1996; Bishop & Walker, 1990; Donnangelo, 1978; Foreman, Wilkie, & Keilen, 1990; Mackin, 1979; Santa, 1979). Attention to individual issues that may interfere with academic progress is an essential element of academic support.

The literature is replete with programs addressing academic probation issues. However, programs are limited that address the academically dismissed student. Most programs simply assess an application for readmission and look for criteria that would suggest that the student have a reasonable chance for success (Hall, 1994; Kinloch, Frost & MacKay, 1993; Phipps, 1978; Russell, 1984; Santa, 1996). A review of literature did not produce many programs that are specifically designed to assist the academically dismissed student. After the review of literature was complete, studies specifically designed for academic interventions at the community college level are limited. Therefore, this research project should fill a void in the literature and evaluate the effectiveness of intensive interventions for academically dismissed students.
CHAPTER III

METHODOLOGY

The purpose of this study was to evaluate the Remediation and Retention Program for students who were placed on first time scholastic drop at LSUA. The study also included the identification of predictors of persistence. Descriptive analysis of the student population who were on first time scholastic drop was needed for further programming and assessment. The identified population included students who were placed on first time scholastic drop at LSUA as measured by their cumulative and semester grade point average.

Design

This study was designed as an ex post facto study. The design can be diagramed as follows:

\[ \begin{array}{c}
 X & O_1 \\
 X & O_2 \\
\end{array} \]

\( X = \text{treatment level (Remediation and Retention Group and the Non Participant Group)} \)

\( O = \text{Academic performance - GPA measures and persistence (as measured by enrollment status two semesters after treatment for the Remediation and Retention Group and re-entry and continuing enrollment for two semesters after sitting out a semester for the Non Participant Group.} \)

For the purpose of this study, the following variables were identified:

Independent Variables: Age at the time students were dropped from the
university; Gender; College Major; Scores attained on the American College Test (ACT); Selected grade point average (GPA) measures (cumulative at the time they were dropped from the university), cumulative GPA at the end of the remediation program (for students who self selected to participate in the program only and semester GPA of students who participated in the Remediation and Retention Program); Number of semester hours of college credit attempted and number of hours earned prior to entering the remediation program and two treatments; study skills seminar and counseling sessions.

Dependent Variable: GPA for the semester of participation in the remediation program (for students who self selected to participate in the program only); and Enrollment status after two semesters following treatment.

Data gathered on each participating student included beginning cumulative GPA, semester GPA, ending cumulative GPA, number of hours earned, number of hours attempted and number of hours earned during treatment semester, grades earned during the treatment semester and records of their attendance at the study skills seminar and number of counseling sessions attended. Demographic information collected on participating students included age, ACT scores, gender, and college major.

Population

The target population for this study was defined as all college-level students placed on first time scholastic drop. The accessible population was further defined as those students placed on first time scholastic drop at Louisiana State University at Alexandria from Fall semester 1995 through Fall semester 1997. The sample used in
this study were the students who self selected to participate in the Remediation and Retention Program at LSUA. At the end of any given semester, LSUA students who, after having been placed on scholastic probation, and who, having failed to maintain a 2.0 or greater grade point average the subsequent semester were informed by a special message on their grade card that they had been placed on scholastic drop and would not be allowed to register for classes during the next semester. Prior to the fall semester of 1995, those students who were placed on scholastic drop at the end of the spring semester of 1995 and the end of the summer semester of 1995 were sent a letter informing them of a new program allowing them to register for classes in the fall of 1995 through self selection into a new program at the university. The letter further informed students of the basic regulations that would guide their reentry process. Eligible students were invited to meet with the registrar at the university to review their particular situation and make a decision on whether or not to return to school the next semester. (See Appendix B for Letter to Eligible Students Concerning Re-entry Option) All students who were placed on first time scholastic drop during the identified semesters were eligible for the program. Those who participated in the Remediation and Retention Program self selected to reenter the university under the guidelines of the new program. A total of 426 students were placed on first time scholastic drop during the treatment program period (spring semester 1995 through fall semester 1997). One hundred twenty-nine students (30%) of those eligible for the intervention self selected into the R&R Program (See Table 4 reflecting the students on first time scholastic drop and those who self selected into the program.
Table 4

First Time Scholastic Drop/Self Selecting into the R&R Program

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<td>1st time scholastic drip</td>
<td>88</td>
<td>77</td>
<td>95</td>
<td>66</td>
<td>100</td>
<td>426</td>
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<td>Self selected into program</td>
<td>23</td>
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<td>20</td>
<td>10</td>
<td>25</td>
<td>129</td>
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<tr>
<td>Percent in program</td>
<td>26%</td>
<td>23%</td>
<td>35%</td>
<td>30%</td>
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Note. The students placed on first time scholastic drop for the spring and summer semesters of 1995 (64) were the eligible group for the fall 1995 treatment semester. The students placed on first time scholastic drop for the spring and summer semesters were eligible for the program during the summer semester and/or the fall semester. Therefore, the figures for the summer semesters are included in the fall numbers and percentages.

Intake Interview

The first "condition" for continuing enrollment required students to report to the registrar's office and discuss the process for readmission. The registrar discussed the program and evaluated the student's transcript. Students were required to assess their past performance and discuss how they were ready to make changes in their academic performance. If the student expressed the desire to continue in this program, the student was given the Petition for Readmission and asked to answer the questions concerning why they should be allowed to enroll, and how they planned to improve their academic performance. (See Appendix D for Petition for Readmission) Questions on the petition included: (1) Why should you be allowed to enroll? (Attach information such as your advisor's or division head's recommendation, or a statement from your employer), (2) How do you plan to improve your academic performance?, and (3) What courses would you like to take? The back of the readmission petition contained the university policy.
concerning probation and drop status. (See Appendix E for Readmission Policy)

Students who applied for the program were required to read and discuss the policy with the registrar and sign the document indicating that they fully understood all the requirements concerning their conditional readmission to LSUA. After completing the form, the student was directed to the Counseling Center to meet with the academic counselor. The student was informed by the academic counselor that attendance was required at a two-hour group study skills seminar and at counseling sessions as assigned. If the student agreed to these terms, the counselor signed the recommendation section of the petition and wrote the interventions in the remarks section. The student was sent back to the registrar where restrictions were lifted from the student’s computer file that allowed the student to register for up to six hours of course work during the current registration period.

Eligible students were allowed to present themselves for inclusion in this program throughout the registration time period. See Figure 2 for the Remediation and Retention Process.

Treatments

Study Skills Seminar

After students completed registration and their class schedules were acquired, a time was set for the study skills session. If a student had a conflict that prohibited their attendance at the study skills seminar and they communicated this prior to the seminar, an individual session was scheduled. The only conflict accepted for an individual session was if the student had class during the seminar time. Students were informed during the intake interview that they would be required to rearrange work schedules, etc.
to attend the session. Letters were sent reminding students of the exact time, place and
date for the study skills session. (See Appendix G for Letter Concerning Study Skills
Seminar)

The study skills session consisted of four general areas. These areas included: (1)
effective reading of college text books, (2) effective note taking, (3) test preparation,
and (4) dealing with test anxieties.

Students were given a packet of resource materials. Some of the materials in the
student packets were used during the study skills seminar, some were used during
subsequent counseling sessions and others were used as reinforcement resource
materials. The packets contained: A Learning and Study Strategies Inventory (LASSI)
(students filled this out on their own time and brought it to a counseling session for
discussion and interpretation), four Channing Bete booklets, How To Beat Test Anxiety,
Be a Better Test Taker, Take Advantage of Textbooks, and How To Study, and several
individual mini packets concerning note taking tips, examples of processes for studying
concepts, (which is used during the session to show how to process materials for tests),
study hints and shortcuts, and a time management schedule (used later during individual
sessions).

After the Study Skills Seminar ended, students were required to go to the
Counseling Center secretary and make a standing appointment with the academic
counselor who worked with them throughout the semester. The program used only one
academic counselor (the researcher) who remained constant throughout the study.
Figure 2

Remediation and Retention Process.
Individual Counseling Sessions

Counseling sessions were conducted in an environment of empathy and acceptance. The first session with the R&R students was used to establish rapport and set goals for the semester. Assignments were often given at the end of the session for the next session. These assignments depended on the needs of the individual student. Assignments included things such as a visit to another support area, arranging a meeting with a professor, reducing work hours, etc.

The overall theme used with students in this program was "If You Continue To Do What You've Always Done, You'll Continue To Get What You've Always Gotten." This saying is not original with the researcher (the academic counselor), and was borrowed from an unknown source. To change grades, i.e. outcomes, behavior must be changed. All R&R activities were geared toward empowering those who want change to eventually be able to facilitate change on their own.

During individual counseling sessions, the student reported upcoming tests, test grades, papers or projects and discussed how they were preparing. Subsequent sessions with students covered many areas of intervention. One session was devoted to the interpretation and discussion of the Learning and Study Strategies Inventory. The identified areas that needed work were interpreted and connected to the study skills discussed in the group session. Any additional work that needed to be done in this area was addressed during this session. Another session focused on time management and how to assess study needs. This session emphasized how to effectively plan study activities throughout each day. Another session was focused on other support services.
that were available on campus. Students were given a packet concerning the location and times of availability of free tutors in the Learning Lab, and the time schedule and remediation software and equipment that were available in the DELL Lab. The DELL Lab is a remediation lab equipped with computers and remediation software packages, to assist students in completing assignments. Students brought a copy of their instructor’s office hours to one of the counseling sessions. Students need to realize that the instructor is the first line of support and be encouraged to access this resource.

Other issues arose during sessions such as personal issues that were interfering with academic progress; working issues that needed to be addressed; college majors that needed to be selected when the student was undecided (testing and follow-up work in this area was required); calculating GPA and assessing what grades were needed to end academic probation, and any other issues that the student wanted to address. Counseling sessions continued until the week before final examinations. The last session concentrated on preparation for finals, selection of classes for next term, and predictions concerning their grades for the semester. The option was offered for students to continue to see the counselor the following semester if they felt they needed additional support. Some of the students in the program were not ready to continue their academic program without counseling interventions.

Procedure for Collecting Counseling Data

The academic counselor created a folder for each student. The folder contained a copy of the Petition for Readmission, a copy of the student's transcript, a copy of his/her course selections for the current semester, and student data forms. A counselor's
comment sheet allowed space for the counselor to write a brief review of each session (See Appendix H for sample Counselor's Comment Sheet). If a student began missing counseling appointments (two consecutive) a letter was sent reminding them of the contract and their obligation to meet with the counselor as scheduled. Students who had conflicts arise were encouraged to reschedule.

Data Collection

A special folder was created for each semester that allowed for the compilation of data for the entire group throughout the semester. The folder was labeled with the semester term date, and contained a student data sheet that included each student's name in that semester session, their student number, a place to date and validate attendance at the Study Skills Seminar, and dates that validated their attendance at regularly scheduled counseling sessions.

Instrumentation

At the end of each semester, a grade report was acquired from the university records for each student and placed in their file. Additional information, e.g., ACT score, was gathered from the university data base. Student files were used as the information resource along with the counselor's information sheet. These data were entered in a Microsoft Excel data base for use in compiling the information needed to run the appropriate statistical procedures. Most student data were available in the individual student file. Any missing information was supplied through a search of the university data base. The Microsoft Excel data base contained age, gender, overall beginning grade point average, grade point average for the current semester, overall
grade point average at the end of the semester, number of hours attempted, number of
hours earned, whether the student attended the study skills session, the number of
counseling sessions attended, college major, and subsequent semester attendance
records.

Data Analysis

Data was analyzed using the following statistical components: appropriate
descriptive statistics to describe the subjects on selected demographic and academic
variables; discriminant analysis was used to find linear combinations of the independent
variables for group prediction; t-test were used to determine statistical significance by
comparing group means; and chi-square test of independence was used to determine if
the mean differences between expected and observed frequencies were beyond what
would be expected by chance. Statistical analysis were conducted using SPSS for
windows.

The purpose of this study was to evaluate the Remediation and Retention Program
for students who were placed on first time scholastic drop at LSUA. The study also
included the identification of predictors of persistence for those in the Remediation and
Retention program. Descriptive analysis of the student population who were on first
time scholastic drop was needed for further programming and assessment.

SPSS for windows was used for statistical analysis. The following variables were
coded to facilitate analysis.

Gender - 1 = female, 2 = male

Persisters - Yes - 1, No - 2
Treatment Groups: Fall 1995 = 1; Spring 1996 = 2; Summer 1996 = 3; Fall 1996
= 4; Spring 1997= 5; Summer 1997= 6; Fall 1997= 7.

College Majors: coded with number 1 - 75, e.g. ACCT = 1, AGBUS = 2, etc. (see
Appendix K for completed coding list)

Objective 1: Describe college students who were placed on first time
scholastic drop between spring semester 1995 and fall semester 1997 on the following
selected demographic characteristics:

a. Age at the time students were dropped from the university;

b. Gender;

c. College major;

d. Scores attained on the American College Test (ACT) (English, math,
reading, and natural sciences);

e. Selected grade point average (GPA) measures (cumulative GPA at the
time students were dropped from the university), cumulative GPA at the
beginning and end of the Remediation and Retention Program (for
students who self selected to participate in the program only); and GPA
for the semester of participation in the Remediation and Retention
Program (for students who self selected to participate in the program
only); and

f. Number of semester hours of college credit hours earned prior to being
placed on first time scholastic drop.
Descriptive statistics were used to describe the population. Means, standard deviations, and standard error of mean were used with variables measured on an interval scale. Frequencies and percentages were used to measure nominal data.

Objective 2: Compare the students who self selected to participate in the Remediation and Retention Program with those who chose not to participate in the program on the following selected academic and demographic characteristics:

a. Age at the time they were dropped from the university; (t-test for Independent Samples)

b. Gender; (Chi-square test for Independence)

c. College major (Chi-square test for Independence)

d. Scores attained on the American College Test (ACT) (English, math, reading and natural sciences); (t-test for Independent Samples)

e. Selected grade point average (GPA) measures (cumulative GPA at the time students were dropped from the university); and cumulative GPA at the beginning and the end of the Remediation and Retention Program (for students who self selected to participate in the program only); (t-test for Independent Samples and t-test for paired samples); and

f. Number of semester hours of college credit earned prior to being placed on first time scholastic drop. (t-test for Independent Samples).

Objective 3: Determine if a relationship existed between the number of counseling sessions attended by the students participating in the Remediation & Retention Program and their academic performance (as measured by GPA for the
treatment semester). (Pearson Product Moment Correlation Coefficient was used to determine if a relationship existed between semester GPA and counseling sessions attended)

Objective 4: Compare the academic performance of students participating in the Remediation & Retention Program (as measured by GPA for the treatment semester) by whether they attended a scheduled Student Skills Seminar. (t-test for Independent Samples)

Objective 5: Determine the proportion of the students participating in the Remediation and Retention Program who attained a satisfactory GPA (defined as 2.00 or higher) for the treatment semester. (frequencies and percentages)

Objective 6: Compare the students in the Remediation and Retention Group with the Non Participant Group on retention rate (as measured by the proportion of students enrolled in the university two semesters after they were dropped from the university). (t-test for Independent Samples)

Objective 7: Determine if a model existed that significantly increased the researcher's ability to correctly classify the Remediation and Retention Group and the Non Participant Group on whether they are still enrolled in the university two semesters after they completed the treatment semester using the following personal and academic characteristics: Discriminant analysis was used for group prediction on the variable persistence.

a. Age at the time they were dropped from the university;

b. Gender;
c. Composite score on the American College Test (ACT)

d. Grade point average (GPA) (cumulative GPA at the time students were dropped from the university;

e. Number of semester hours of college credit earned prior to being placed on first time scholastic drop; and

f. Whether they self selected to participate in the Remediation and Retention Program.
CHAPTER IV

RESULTS

This study was instituted to evaluate the Remediation and Retention Program at LSUA. The objectives included evaluation of improved semester GPA at the end of treatment, the effectiveness of attending the study skills seminar and counseling sessions, and predicting retention. The research was further designed to describe the students who were placed on first time scholastic drop beginning the spring semester of 1995 through the fall semester of 1997. This chapter will present the data and explain the findings which are organized according to the objectives of this study.

Definitions used in data analysis include:

Total Group = students placed on first time scholastic drop from the end of the spring semester of 1995 through the fall of 1997

R&R Group = students on first time scholastic drop who self selected into the Remediation and Retention Program.

Non Participant Group = students on first time scholastic drop who chose not to participate in the readmission program.

An alpha level of .05 was used for all statistical tests.

The format used to present the statistical findings related to Objectives 1 through 7 includes a restatement of the Objective and statistical conclusion followed by a table (where appropriate) presenting the statistical findings. The tables include:

Groups - Total Group, Non Participant Group, or R&R Group

Number of subjects (N)
Objective 1: Descriptive Analysis

Objective 1: Describe college students who were placed on first time scholastic drop between spring semester 1995 and fall semester 1997 on the following selected demographic characteristics:

a. Age at the time students were dropped from the university

The Total Group (students placed on first time scholastic drop) (N= 426) exhibited a mean age of 21.97, with a standard deviation of 5.53. Ages ranged from 18 to 61. The Non Participant Group had a mean age of 21.96, and a standard deviation of 5.76. The R&R Group exhibited a mean age of 21.86, with a standard deviation of 4.74. A majority of the students were in the 18 - 24 age category (Total Group, 85.2%, Non Participant Group, 84.2%, and the R&R Group, 88.4%). See Table 5 for the number of students in age categories by groups.

b. Gender

The Total Group, (N=426) exhibited a 62.2% (265) female and 37.8% (161) male gender distribution. The Non Participant Group was 59.9% (178) females and 40.1% (161) males. The R&R group was 67.4% (87) female and 32.6% (42) male. See Table 6 for gender description by age for groups.
Table 5

Number of Students in Each Age Category

<table>
<thead>
<tr>
<th>Age</th>
<th>Total group</th>
<th>Non participant group</th>
<th>R&amp;R group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>P</td>
<td>N</td>
</tr>
<tr>
<td>18 - 24</td>
<td>363</td>
<td>85.2</td>
<td>250</td>
</tr>
<tr>
<td>25-35</td>
<td>50</td>
<td>11.7</td>
<td>38</td>
</tr>
<tr>
<td>36 - 45</td>
<td>10</td>
<td>2.4</td>
<td>6</td>
</tr>
<tr>
<td>46 - 61</td>
<td>3</td>
<td>.7</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>426</td>
<td>100</td>
<td>297</td>
</tr>
</tbody>
</table>

Note. Total group (mean = 21.87, standard deviation = 5.53), Non participant group (mean = 21.96, standard deviation = 5.76), and R&R group (mean = 21.86, standard deviation = 4.74).

Table 6

Gender Description by Age for Groups

<table>
<thead>
<tr>
<th>Total Group (N=426)</th>
<th>Non Participant Group (n=297)</th>
<th>R&amp;R Group (n=129)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>N</td>
<td>P</td>
</tr>
<tr>
<td>Females</td>
<td>265</td>
<td>62.2</td>
</tr>
<tr>
<td>Males</td>
<td>161</td>
<td>37.8</td>
</tr>
</tbody>
</table>

C. College major

Seventy-five college majors were represented in the Total Group. The most frequently occurring college majors for all groups were: PNUAD (Pre Nursing); Total Group had 81 (19%), Non Participant Group had 56 (18.9%) and the R&R Group had 26 (20.2%), LIBAR, (Liberal Arts); Total Group had 51, (12%), Non Participant Group had 41, (13.8%) R&R Group had 9, (7%) ELED (Elementary Education); Total Group had 39 (7.3%), Non Participant Group had 23 (7.7%), R&R Group had 16 (12.4%) and GBUS (General Business); Total Group had 31 (7.3%), Non Participant Group had 21
(7.1%) and the R&R Group had 12 (9.4%). The above mentioned majors, along with the addition of CJ (criminal justice), PSYC (psychology), PT (physical therapy) and RT (respiratory therapy), explain more than 60% of the college major choices. The other majors represented 39.9% of the Total Group, 37.7% of the Non Participant Group, and 48.8% of the R&R Group. See Table 7 for the most frequently occurring college majors by groups. See Appendix G and H for complete list of major codes.

d. Scores on the American College Test (ACT) (Composite, English, Math, Reading, and Natural Sciences)

The mean composite ACT score for the Total Group was 17.63 (N=354), with a standard deviation of 3.6. The English portion of the ACT scores reflected a mean of 17.52 (N=354), with a standard deviation of 4.5. The Math portion of the ACT scores had a mean of 16.28 (N=354) with a standard deviation of 3.6. The Reading portion of the ACT had a mean of 18.27 (N=354), with a standard deviation of 5.13. The mean ACT scores for the Natural Science portion of the ACT scores was 18.08 (N=354) with a standard deviation of 6.4. Seventy-two (16.9%) scores were missing.

Table 7

Frequently Occurring College Majors by Groups

<table>
<thead>
<tr>
<th>College major (75)</th>
<th>Total group</th>
<th>Non participant group</th>
<th>R&amp;R group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>P</td>
<td>N</td>
</tr>
</tbody>
</table>

(table con’d.)
<table>
<thead>
<tr>
<th>College major (75)</th>
<th>Total group</th>
<th>Non participant group</th>
<th>R&amp;R group</th>
</tr>
</thead>
<tbody>
<tr>
<td>PNAUD (pre nursing)</td>
<td>81</td>
<td>19</td>
<td>56</td>
</tr>
<tr>
<td>LIBAR (liberal arts)</td>
<td>51</td>
<td>12</td>
<td>41</td>
</tr>
<tr>
<td>ELED (elementary education)</td>
<td>39</td>
<td>7.3</td>
<td>23</td>
</tr>
<tr>
<td>GBUS (general business)</td>
<td>31</td>
<td>7.3</td>
<td>21</td>
</tr>
<tr>
<td>CJ (criminal justice)</td>
<td>19</td>
<td>4.5</td>
<td>12</td>
</tr>
<tr>
<td>PSYC (psychology)</td>
<td>16</td>
<td>3.8</td>
<td>12</td>
</tr>
<tr>
<td>PT (physical therapy)</td>
<td>13</td>
<td>3.1</td>
<td>7</td>
</tr>
<tr>
<td>RT (respiratory therapy)</td>
<td>13</td>
<td>3.1</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td>263</td>
<td>60.1</td>
<td>185</td>
</tr>
<tr>
<td>Other majors</td>
<td>163</td>
<td>39.9</td>
<td>112</td>
</tr>
</tbody>
</table>

Note. See Appendices G and H for complete listing of majors.

The Non Participant Group (n = 246) had a mean composite score on the ACT of 17.63, with a standard deviation of 3.6. The English portion of the ACT had a mean of 17.36 with a standard deviation of 4.5. The Math portion of the ACT exhibited a mean of 16.39 with a standard deviation of 3.6. The Reading portion of the ACT had a mean of 18.18 with a standard deviation of 5.2. The Natural Science portion of the ACT had a mean of 18.23 with a standard deviation of 7.3. Fifty-one (17%) scores were missing. The missing scores are representative of those students who did not take the ACT and were allowed to enter the university under a policy that allows entry with the stipulation that all remedial work must be addressed.
The R&R Group \((n = 129)\) exhibited a mean composite score on the ACT of 17.63 with a standard deviation of 3.6. The English portion of the ACT had a mean of 17.87 and a standard deviation of 4.6. The Math portion of the ACT had a mean of 16.07 and a standard deviation of 3.6. The Reading portion of the ACT presented a mean of 18.41 with a standard deviation of 5.0. The Natural Science portion of the ACT had a mean of 17.66 with a standard deviation of 3.6. Twenty-one (16.2\%) scores were missing.

See Table 8 for a complete description of the Composite, English, Math, Reading and Natural Science scores on the ACT. The missing scores are representative of those students who did not take the ACT and were allowed to enter the university under a policy that allows entry with the stipulation that all remedial work must be addressed.

e. Selected grade point average (GPA) measures (cumulative GPA at the time they were dropped from the university), cumulative GPA at the beginning and end of the Remediation and Retention Program (for students who self-selected to participate in the program only), and GPA for the semester of participation in the Remediation and Retention Program (for students who self selected to participate in the program only)

The mean beginning cumulative GPA of the Total Group \((N=426)\) was .96 with a standard deviation of .55. Beginning cumulative GPA’s ranged from 0 to 1.96. The Non Participant Group had a beginning cumulative GPA mean of .87 with a standard deviation of .56. The R&R Group had a beginning cumulative GPA mean of 1.15 with a standard deviation of .48. See Table 9 for the beginning cumulative GPA frequencies and percentages for groups.

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Table 8

Composite, English, Math, Reading and Natural Science Scores for Groups

<table>
<thead>
<tr>
<th>ACT scores</th>
<th>Total group (N=354)</th>
<th>Non participant group (n=246)</th>
<th>R&amp;R group (n=108)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Composite</td>
<td>17.63</td>
<td>3.6</td>
<td>17.63</td>
</tr>
<tr>
<td>English</td>
<td>17.52</td>
<td>4.5</td>
<td>17.36</td>
</tr>
<tr>
<td>Math</td>
<td>16.28</td>
<td>3.6</td>
<td>16.39</td>
</tr>
<tr>
<td>Reading</td>
<td>18.27</td>
<td>5.1</td>
<td>18.18</td>
</tr>
<tr>
<td>Natural science</td>
<td>18.08</td>
<td>6.4</td>
<td>18.23</td>
</tr>
</tbody>
</table>

Note. There was a total of 72 missing cases on the variables ACT scores. Some students did not take the ACT. The university allows entry without the ACT score on the condition that all remedial course work is completed.

Table 9

Beginning Cumulative GPA Frequencies and Percentages for Groups

<table>
<thead>
<tr>
<th>GPA</th>
<th>Total group (N=426)</th>
<th>Non participant group (n=297)</th>
<th>R&amp;R group (n=129)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>P</td>
<td>N</td>
</tr>
<tr>
<td>0</td>
<td>56</td>
<td>13.1</td>
<td>50</td>
</tr>
<tr>
<td>.125 - .999</td>
<td>147</td>
<td>34.6</td>
<td>114</td>
</tr>
<tr>
<td>1.0 - 1.5</td>
<td>139</td>
<td>32.6</td>
<td>84</td>
</tr>
<tr>
<td>1.51 - 1.99</td>
<td>84</td>
<td>19.7</td>
<td>49</td>
</tr>
</tbody>
</table>

Note. Total group had a mean GPA of .96 and a standard deviation of .55, Non participant group had a mean GPA of .87 and a standard deviation of .56, and the R&R group had a mean GPA of 1.15 and a standard deviation of .48.

The R&R Group exhibited a semester GPA mean of 1.63, with a standard deviation of 1.19. Semester GPA's ranged from 0 to 4.0. Fifty-six (47.1%) of the students had semester GPA's below 2.0. Sixty-three (52.9%) of the 129 students achieved a 2.0 or higher GPA for the semester. There were 10 (7.8%) missing cases. The missing cases

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were students who withdrew during the semester. See Table 10 for frequencies and percentages for semester GPA.

The R&R Group had an ending cumulative mean GPA at the end of the treatment of 1.24, with a standard deviation of .50. GPA's ranged from 0 to 2.5. See Table 10 for frequencies and percentages for ending cumulative GPA for the R&R Group.

Table 10

Frequencies and Percentages for Beginning and Ending Cumulative GPA and Semester GPA for the R&R Group

<table>
<thead>
<tr>
<th></th>
<th>Beginning GPA (n=129)</th>
<th>Ending GPA (n=119)</th>
<th>Semester GPA (n=119)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>p</td>
<td>n</td>
</tr>
<tr>
<td>0 - .99</td>
<td>39</td>
<td>30.2</td>
<td>30</td>
</tr>
<tr>
<td>1.0 - 1.5</td>
<td>54</td>
<td>41.8</td>
<td>57</td>
</tr>
<tr>
<td>1.6 - 1.9</td>
<td>36</td>
<td>28</td>
<td>30</td>
</tr>
<tr>
<td>2.0 - 2.5</td>
<td>2</td>
<td>1.7</td>
<td>42</td>
</tr>
<tr>
<td>3.0 - 3.5</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.5 - 4.0</td>
<td>6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Ten cases were missing from the ending GPA and the semester GPA. These cases were represented by the students who withdrew during the semester. The mean for the beginning GPA was 1.15 and a standard deviation of .48, the mean for the ending cumulative GPA was 1.24 and a standard deviation of .50 and the mean for the semester GPA was 1.63 and a standard deviation of 1.19.

f. Number of semester hours of college credit earned prior to being placed on first time scholastic drop.
The number of hours earned by the Total Group (N=426) at the time of being placed on scholastic drop had a mean of 18.99 with a standard deviation of 16.6. Three hundred eighteen (74.6%) of the students had earned 0 - 25 credit hours. Table 11 describes the three groups on the variable number of college credit hours at the point of being placed on first time scholastic drop.

Objective 2: Companion of the R&R and Non Participant Groups

Objective 2: Compare the students who self selected to participate in the Remediation and Retention Program with those who chose not to participate in the program on the following selected academic and demographic characteristics:

Table 11

Number of Credit Hours Earned at the Point of Being Placed on First Time Scholastic Drop

<table>
<thead>
<tr>
<th>Hours earned</th>
<th>Total group</th>
<th>Non participant group</th>
<th>R&amp;R group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M = 18.99</td>
<td>M = 17.20</td>
<td>M = 23.12</td>
</tr>
<tr>
<td></td>
<td>SD = 16.61</td>
<td>SD = 16.16</td>
<td>SD = 16.95</td>
</tr>
<tr>
<td>0 - 25</td>
<td>318 74.6</td>
<td>228 76.8</td>
<td>90 69.8</td>
</tr>
<tr>
<td>26 - 49</td>
<td>83 19.5</td>
<td>56 18.8</td>
<td>26 20.1</td>
</tr>
<tr>
<td>50 - 108</td>
<td>35 5.9</td>
<td>14 4.4</td>
<td>13 10.1</td>
</tr>
</tbody>
</table>

a. Age at the time they were dropped from the university

Mean ages were compared for the Non Participant and the R&R Group using the t-test for independence statistical procedure. The comparison of age means resulted in finding no significant difference (t, (424) = 0.25 p = .799) The groups were not
significantly different on the variable age. Table 12 compares the mean ages of the Non Participating Group and the R&R Group.

Table 12

**Comparison of the Non Participant Group and the R&R Group by Age**

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non Participant Group</td>
<td>297</td>
<td>22.02</td>
<td>5.85</td>
<td>.25</td>
<td>424</td>
<td>.799</td>
</tr>
<tr>
<td>R&amp;R Group</td>
<td>129</td>
<td>21.87</td>
<td>4.74</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

b. Gender

The Chi-Square test for Independence was used to determine whether the variables gender and treatment group were independent. The Non Participant Group was 60% (178) female and 40% (178) male. The R&R Group was 67% (87) female and 43% (42) male. The difference between the observed and the expected percentages was not significant. The Chi-Square value was 2.15 with a p of .14. The variables were found to be independent, non significant \( \chi^2 = .14 \). The number of females and males in each group was not significantly different than expected.

Table 13

**Frequencies and Percentages for Gender by Non Participant Group and the R&R Group**

<table>
<thead>
<tr>
<th>Gender</th>
<th>Non participant group</th>
<th>R&amp;R group</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>1</td>
<td>178</td>
<td>87</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>80.2%</td>
<td>62.2%</td>
</tr>
<tr>
<td></td>
<td>59.9%</td>
<td>67.4%</td>
<td></td>
</tr>
</tbody>
</table>

(Table con’d.)
b. College major

A Chi-Square test was used to determine whether the variables major and identified groups were independent. Many of the cells contained five or fewer cases, therefore, the curriculum (college majors) was collapsed into five divisions, 0 = undecided, 1 = Nursing, 2 = Business, 3 = Science, and 4 = Liberal Arts. From the table, it can be seen that one cell has less than 5 cases. However, the expected value of 6.3 is bigger than 1. Only one cell having a low expected value did not rule out using the chi-square statistic in this situation. Liberal Arts had the highest number of students reporting that major, 177 (41.5%). Science majors represented 99 (23.2%) and nursing represented 87 (20.4%). The Chi-Square value results, 10.48 with a p of .03. The probability of .03 indicates that it is likely the variables were not independent in the population. See Table 14 for the significance of the groups on the variable college major.

d. Scores attained on the American College Test (ACT) (English, Math, Reading and Natural Sciences)
Mean composite ACT scores were compared between the R&R and Non Participant groups using the independent t-test procedure. The R&R group had a mean value of 17.63 and the Non Participant group had a mean value of 17.63. The results indicated that the groups were not significantly different \( (t_{352} = .01, p = .991) \). Table 15 shows the comparison of mean differences between the Non Participant Group and the R&R Group on composite ACT scores.

Mean English ACT scores were compared between the R&R and Non Participant groups using the independent t-test procedure. The R&R group had a mean value of 17.87 and the Non Participant group had a mean value of 17.37. The groups were not significantly different \( (t_{352} = -.97, p = .332) \). Table 16 shows the results of the test for significance regarding the mean English score for groups.

Table 14

<table>
<thead>
<tr>
<th>Chi-Square by Groups on the Variable College Major.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Expected Row percent</td>
</tr>
<tr>
<td>--------------------------------</td>
</tr>
<tr>
<td>Total group</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>6.3</td>
</tr>
<tr>
<td>.7%</td>
</tr>
<tr>
<td>Column total</td>
</tr>
<tr>
<td>9%</td>
</tr>
<tr>
<td>2.1%</td>
</tr>
</tbody>
</table>

Note. Chi-Square Value = 10.47, df = 4, p = .03
Mean math ACT scores were compared between the R&R group and the Non Participant group using the independent \( t \)-test procedure. The R&R group had a mean value of 16.07 and the Non Participant group had a mean value of 16.37. The groups were not significantly different \((t_{352} = .72, p = .470)\). Table 17 shows the results of the test for significance regarding the mean Math score of the groups.

Table 15

**Comparison of Means Between Groups on Composite ACT Scores**

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>( t )</th>
<th>( df )</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non participant</td>
<td>246</td>
<td>17.63</td>
<td>3.6</td>
<td>0.01</td>
<td>352</td>
<td>.991</td>
</tr>
<tr>
<td>R&amp;R group</td>
<td>108</td>
<td>17.63</td>
<td>3.6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 16

**Comparison of Means Between Groups on the English ACT Scores**

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>( t )</th>
<th>( df )</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non participant</td>
<td>246</td>
<td>17.37</td>
<td>4.5</td>
<td>-0.97</td>
<td>352</td>
<td>.332</td>
</tr>
<tr>
<td>R&amp;R group</td>
<td>108</td>
<td>17.87</td>
<td>4.6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 17

**Comparison of Means Between Groups on Math ACT Scores**

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>( t )</th>
<th>( df )</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non participant</td>
<td>246</td>
<td>16.37</td>
<td>3.6</td>
<td>.72</td>
<td>352</td>
<td>.470</td>
</tr>
<tr>
<td>R&amp;R group</td>
<td>108</td>
<td>16.07</td>
<td>3.6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Mean reading ACT scores were compared between the R&R and Non Participant groups using the independent t-test procedure. The R&R group had a mean value of 17.66 and the Non Participant group had a mean value of 18.20. The groups were not significantly different ($t_{352} = -0.34$, $p = 0.731$). Table 18 shows the results of the test for significance regarding the mean Reading ACT score.

Mean natural science ACT scores were compared between the R&R and Non Participant groups using the independent t-test procedure. The R&R group had a mean value of 17.66 and the Non Participant group had a mean value of 18.26. Results indicate that the groups were not significantly different ($t_{352} = 0.81$, $p = 0.416$). Table 19 shows the results of the test for significance regarding the mean Natural Science ACT scores.

Table 18

Comparison of Means Between Groups on the Reading ACT Scores

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non participant group</td>
<td>246</td>
<td>18.20</td>
<td>5.2</td>
<td>-0.34</td>
<td>352</td>
<td>0.731</td>
</tr>
<tr>
<td>R&amp;R group</td>
<td>108</td>
<td>17.66</td>
<td>3.6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 19

Comparison of Means Between Groups on the Natural Science ACT Scores

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non participant group</td>
<td>246</td>
<td>18.26</td>
<td>7.3</td>
<td>.81</td>
<td>352</td>
<td>0.416</td>
</tr>
</tbody>
</table>

(table con’d.)
e. Selected grade point average (GPA) measures (cumulative GPA at the
time students were dropped from the university); and cumulative GPA at the
beginning and end of the Remediation and Retention Program (for students who self selected to
participate in the program only); and GPA for the semester of participation in the
Remediation and Retention Program (for students who self selected to participate in the
program only)

Means of the beginning cumulative GPA were compared for the Non Participant
and the R&R group using the t-test for independence procedure. Levene’s test for
equality of variances resulted in a $F_{(426)} = 6.91$, $p = .009$. The probability estimate
indicates a significant difference between the sample variances. Since the homogeneity
assumption has been violated, the t-test was not run. The mean GPA for the R&R Group
was 1.15, with a standard deviation of .48. The Non Participant’s Group mean GPA was
.96 with a standard deviation of .55. After further consideration of the data, the Mann-
Whitney test was used since normality and equality-of-variance assumptions were not
needed. The Mann-Whitney results reported a mean rank of 195.53 for the Non
Participant Group ($n = 297$) and a mean rank of 254.88 for the R&R Group. ($n = 129$),
$U = 13818$, with $p = <.001$. A statistically significant difference existed between the
Non Participant and the R&R groups for beginning cumulative GPA. The R&R Group’s
beginning cumulative GPA mean was significantly higher than the Non Participant
group.
A t-test for paired samples was used to compare the beginning and ending GPA of the R&R Group. See Table 20 for a comparison of means between the beginning cumulative GPA and the ending cumulative GPA of the R&R Group. The beginning cumulative GPA had a mean of 1.15 with a standard deviation of 48. The ending cumulative GPA had a mean of 1.24 with a standard deviation of 50. The test resulted in a two tail significance level of <.001. The R&R Group’s ending (after treatment) cumulative GPA was significantly higher than the group’s beginning cumulative GPA.

Table 20

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>N</th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPA beginning cumulative</td>
<td>1.15</td>
<td>.48</td>
<td>129</td>
<td>-4.86</td>
<td>128</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>GPA end cumulative</td>
<td>1.24</td>
<td>.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

f. Number of semester hours of college credit completed prior to being placed on first time scholastic drop.

A t-test for Independent Samples was used to compare the means on the variable number of hours earned at the time of being placed on first time scholastic drop for the R&R Group and the Non Participant Group. Table 21 shows the results of the comparison of means on the number of college credit hours earned by groups. The comparison of number of college credit hours earned results were ($t_{(426)} = -3.43, p = .001$) The number of college credit hours earned at the time of being placed on first time scholastic drop was significantly higher for the R&R Group.
Table 21

Comparison of Means Between the Groups for Number of College Credit Hours Earned at the Point of Entering the Program

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non participating group</td>
<td>297</td>
<td>17.20</td>
<td>16.11</td>
<td>-3.43</td>
<td>424</td>
<td>.001</td>
</tr>
<tr>
<td>R&amp;R group</td>
<td>129</td>
<td>23.12</td>
<td>16.95</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Objective 3: The Relationship between Number of Counseling Sessions and GPA

Objective 3: Determine if a relationship exists between the number of counseling sessions attended by the students participating in the Remediation and Retention Program and their academic performance (as measured by GPA for the treatment semester).

The Pearson Product Moment Correlation Coefficient was used to determine if there was a relationship between the number of counseling sessions attended and semester GPA. The correlation coefficient for the number of counseling sessions attended and semester GPA resulted in a r of .0. Since the observed correlation is 0, there appears to be no linear association between the two variables in the population. No correlation was found between the number of counseling sessions attended and academic performance.

Objective 4: Compare Study Skill Seminar Attendance with Semester GPA

Objective 4: Compare the academic performance of students participating in the Remediation and Retention Program (as measured by GPA for the treatment semester) by whether they attended a scheduled Study Skills Seminar.
A \( t\)-test for Independent Samples was selected a'priori for the statistical analysis of objective four. The Levene's test for equality of variances had an \( F \) value = to 12.31 with a \( p \) of <.001. The relatively large value for \( F_{\text{max}} \) indicates a large difference between the sample variances. The data suggest that the population variances are different and that the homogeneity assumption has been violated. The \( t\)-test was not used. The group that attended the study skills seminar numbered 98 (76%) of the students in the R&R program. Those who did not attend accounted for 31 (24%) of the students. Ten students did not have semester GPA's because they withdrew during the semester. After further consideration of the data, the Mann-Whitney test was used since normality and equality-of-variance assumptions were not needed. The Mann-Whitney results reported a mean rank of 68.12 for those attending the study skills seminar and 55.15 for those students not attending the study skills seminar. The \( U = 1213.5 \), with a \( p = .09 \). A statistically significant difference in the GPA of those who attended the study skills seminar and those who did not attend was not evidenced.

**Objective 5: Proportion of Students in the R&R Group with a GPA of 2.0 or Higher**

Objective 5: Determine the proportion of the students participating in the Remediation and Retention Program who attained a satisfactory GPA (defined as 2.00 or higher) for the treatment semester.

Sixty-three (52.9%) of the students who participated in the R&R Program attained a semester GPA of 2.0 or above. Fifty-six (47%) of the students who participated in the R&R Program obtained a semester GPA below 2.0. Eight percent
(10) were missing. The missing scores were students who withdrew during the semester.

See Table 22 for Semester GPA Results for the R&R Group.

Table 22

**Proportion of the R&R Group Attaining a 2.0 or Higher GPA for the Treatment Semester**

<table>
<thead>
<tr>
<th>Semester GPA</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPA of 0 - .99</td>
<td>32</td>
<td>24.8%</td>
</tr>
<tr>
<td>GPA of 1.0 - 1.99</td>
<td>24</td>
<td>18.6%</td>
</tr>
<tr>
<td>GPA of 2.0 - 2.99</td>
<td>42</td>
<td>32.6%</td>
</tr>
<tr>
<td>GPA of 3.0 - 3.99</td>
<td>15</td>
<td>11.6%</td>
</tr>
<tr>
<td>GPA of 4.0</td>
<td>6</td>
<td>4.7%</td>
</tr>
</tbody>
</table>

Note. N = 129, Valid cases 119, Missing cases 10

**Objective 6: Comparison of Retention Rate Between the R&R and the Non Participant Groups**

Objective 6: Compare the students in the Remediation and Retention Program with the Non Participant Group on retention rate (as measured by the proportion of students enrolled in the university two semesters after they were dropped from the university).

A t-test for Independent Samples was a’priori selected to compare the groups on the variable of persistence (continued in school for two semesters). Levene’s test for equality of variances had an F = 63.491, p = <.001. The probability estimate indicates that a significant difference exists between the sample variances. Since the homogeneity assumption has been violated, the t-test was not run. The variables were non-parametric, therefore a Chi-Square distribution seemed the appropriate statistical procedure.
Twenty-three (7.7%) of the Non Participant Group ($n=297$) were still enrolled at the university two semesters after returning to school. Twenty-seven (20.9%) of the R&R Group was still enrolled at the university two semesters after the treatment semester. The Chi-Square had a group value of $15.09$, $df = 1$, $p < .001$. The treatment group (R&R Group) had a significantly higher proportion of students who were still enrolled two semesters after treatment. See Table 23 for comparison of persistence (enrolled at the university two semesters after treatment) and the Non Participant and R&R Groups.

Objective 7: Discriminant Analysis for Predicting Persistence

Objective 7: Determine if a model existed that significantly increases the researcher's ability to correctly classify subjects on whether students are still enrolled in the university two semesters after they completed the treatment semester using the following personal and academic characteristics:

a. Age at the time they were dropped from the university;

b. Gender;

c. Composite score on the American College Test (ACT)

d. Grade point average (GPA) (cumulative GPA at the time students were placed on academic probation);

e. Number of semester hours of college credit attempted prior to being placed on first time scholastic drop; and

f. Whether they self selected to participate in the Remediation and Retention Program.
Table 23

Comparison of Persistence (Enrolled at the University Two Semesters After Treatment) with the Non Participant and R&R Group

<table>
<thead>
<tr>
<th>Frequency Expected Col. percent</th>
<th>Non participant group</th>
<th>R&amp;R group</th>
<th>Row total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persisters yes</td>
<td>23</td>
<td>27</td>
<td>52</td>
</tr>
<tr>
<td></td>
<td>34.9</td>
<td>15.1</td>
<td>11.7%</td>
</tr>
<tr>
<td></td>
<td>7.7%</td>
<td>20.9%</td>
<td>11.7%</td>
</tr>
<tr>
<td>Persisters no</td>
<td>274</td>
<td>102</td>
<td>376</td>
</tr>
<tr>
<td></td>
<td>262.1</td>
<td>113.9</td>
<td>88.3%</td>
</tr>
<tr>
<td></td>
<td>92.3%</td>
<td>79.1%</td>
<td></td>
</tr>
<tr>
<td>Column totals</td>
<td>297</td>
<td>129</td>
<td>426</td>
</tr>
<tr>
<td></td>
<td>69.7%</td>
<td>30.2%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Note. Chi-Square value = 15.09, df = 1, p = <.001

Discriminant analysis computes “discriminant scores” for each case to predict what group it is in. Linear combinations of the independent variables are used to obtain these scores. Mathematical techniques are used to determine the way of computing scores that results in the best separation among the groups. Therefore, discriminant analysis was the appropriate statistical process to use to determine how well the variables predict classification of groups.

Four hundred twenty-six students were placed on first time scholastic drop from the spring semester of 1995 through the fall semester of 1997. Of these 426 students, 129 self selected into the Remediation and Retention Program. Discriminant analysis was the statistical procedure used to determine if a model existed that significantly increased the researcher's ability to correctly classify subjects on whether they were still enrolled in the university two semesters after they completed the treatment semester for
the R&R Group and the Non Participant Group (those who came back to school for two semesters after sitting out a semester). Four hundred five cases were included in the analysis. Twenty-one were excluded because they had at least one missing discriminating variable. Three hundred seventy-four of the students were not enrolled after two additional semesters, and 52 were still enrolled after two semesters. Significant difference for prediction of persistence was found for both groups on the variable GPA.

The Stepwise method of discriminant analysis was used with all the variables in objective seven. Comparison of the group means on each of the independent variables was the first step of the discriminate analysis. The model included demographic and scholastic information from the university data base. The variables included: age, gender, composite ACT scores, the number of college credit hours earned at the time of scholastic drop, and the beginning cumulative GPA. The exploratory model attempted to maximize the researcher’s ability to correctly classify subjects on the dependent variable persistence. Persistence was defined as whether students in both groups were enrolled at the university two semesters after (1) treatment, or (2) setting out a semester. Table 24 presents the comparison of group means, standard deviations and gives the F ratio and the p value. All results were evaluated used the .05 alpha level. The first step in examining data for classification of cases was to compare the group means of each of the independent variables.

The only variables exhibiting significance were GPA (p = <.001) and hours earned (p = <.001). Table 25 shows the mean, standard deviations, F ratio values and the probability for each analyzed variable.
The second step involved in executing a discriminant analysis after comparing the discriminating variables was to examine the independent variables included in the analysis for the presence of multicollinearity. Multicollinearity takes into account the relationship of each independent variable with all the other independent variables, and examines independent variables in combination. A high collinearity is based on the cumulative $R_c$ values that are close to 1.0. The Pooled Within-Groups Correlation Matrix is run to ensure that there were no cases of collinearity between the independent variables. The variables ACT and Age had low negative collinearity (-.32) and GPA and hours earned had a high positive collinearity (.73). The correlations between the discriminating variables used in the study are shown in Table 25.

Table 24

Means, Standard Deviations, and F-ratios Between Groups for Discriminant Variable Persisters (N= 405)

<table>
<thead>
<tr>
<th>Discriminating Variable</th>
<th>Group</th>
<th>F-ratio</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Persist (n=41)</td>
<td>NonPersist (N=364)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>M/SD</td>
<td>M/SD</td>
<td></td>
</tr>
<tr>
<td>GPA</td>
<td>1.30/.437</td>
<td>9.00/.554</td>
<td>20.4</td>
</tr>
<tr>
<td>Hours Earned</td>
<td>26.51/19.57</td>
<td>17.48/15.74</td>
<td>11.5</td>
</tr>
<tr>
<td>ACT Composite</td>
<td>17.07/5.29</td>
<td>15.23/6.85</td>
<td>2.49</td>
</tr>
<tr>
<td>Age</td>
<td>22.37/4.43</td>
<td>21.96/5.70</td>
<td>.19</td>
</tr>
<tr>
<td>Gender</td>
<td>1.37/.49</td>
<td>1.38/.49</td>
<td>.04</td>
</tr>
</tbody>
</table>
Table 25

Pooled Within-Groups Correlation Matrix for the Discriminating Variables (N=405)

<table>
<thead>
<tr>
<th></th>
<th>ACT</th>
<th>Age</th>
<th>Gender</th>
<th>GPA</th>
<th>Hours Earned</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-.32</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>.07</td>
<td>-.10</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GPA</td>
<td>-.07</td>
<td>.12</td>
<td>-.10</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Hrs. Ern</td>
<td>-.12</td>
<td>.14</td>
<td>-.11</td>
<td>.73</td>
<td>1.00</td>
</tr>
</tbody>
</table>

These correlations and their interpretative value include:

± .90 to ± 1.00  Very high positive/negative correlation
± .70 to ± 0.90  High positive/negative correlation
± .50 to ± 0.70  Moderate positive/negative correlation
± .30 to ± 0.50  Low positive/negative correlation
± .00 to ± 0.30  Little or no correlation

The correlations between the discriminating variables were interpreted using Hinkle, Wiersma and Jurs’ scale (1988, p.118).

The next step in conducting a discriminant analysis involves examining the computed standardized canonical discriminant function coefficients. The group centroids were determined to be .74 for the group identified as persisters and -.08 for the group identified as non persisters. The combination of factors in the model explained 4.8% of the variability in whether students persisted. The variable which was significantly different was identified as the GPA. Table 26 explains the highest within-structure coefficient, $s = 1$. Therefore, this variable, GPA, met the requirements of
substantive significance for inclusion in the model. The other variables did not meet this criteria.

Finally, the percent of correctly classified cases were examined. Table 27 shows the complete model that correctly classified 88.03% of the cases analyzed. Based on statistical assumptions derived from the data concerning the persister groups (i.e., R&R Group = Group 1 and the Non Participant Group = Group 2), there were 50 cases in the persisters group and 376 in the non persisters group. The discriminant analysis procedure indicated that none of the students who were labeled as persisters qualified to fit in the persisters group, and 99.7% of the non persisters were qualified to fit in the non persisters group. Results would indicate that all but .3% of the cases evaluated were classified as non persisters. The Tau statistic (Barrick & Warmbrod, 1988) represents 79% improvement over chance. Since the majority of the students (99.7%) were predicted to be non persisters, the classification model based on the identified variables is not useful for classifying those students who may be persisters.

Table 26

Summary of Canonical discriminate Function Coefficients (N=409)

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>s</th>
<th>B₀</th>
<th>Group</th>
<th>Centroids</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPA</td>
<td>1</td>
<td>1</td>
<td>1.8</td>
<td>Persisters</td>
<td>.67 Non Persisters -.08</td>
</tr>
<tr>
<td>B₀ (constant)</td>
<td></td>
<td></td>
<td>-1.73</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Eigenvalue</th>
<th>R₀</th>
<th>Wilks lambda</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>.048</td>
<td>.22</td>
<td>.952</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Note, b = standardized discriminant function coefficient, s = within-groups structure coefficient, B₀ = unstandardized discriminant function coefficient, R₀ = canonical correlation coefficient
Table 27

**Classification of Cases by Persistence**

<table>
<thead>
<tr>
<th>Actual Group</th>
<th>Number of Cases</th>
<th>Predicted group</th>
<th>Non persisters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persisters</td>
<td>50</td>
<td>0</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Non Persisters</td>
<td>376</td>
<td>1</td>
<td>375</td>
</tr>
<tr>
<td></td>
<td></td>
<td>.3%</td>
<td>99.7%</td>
</tr>
</tbody>
</table>

**Note.** Percent of “group” cases correctly classified: 88.03%.
CHAPTER V

CONCLUSIONS, RECOMMENDATIONS AND DISCUSSION

This research project was designed to evaluate the Remediation and Retention Program at Louisiana State University at Alexandria. The following conclusions and recommendations are based upon the objectives and the findings.

Objective 1: Students on first time scholastic drop at LSUA from the end of the spring semester 1995 through the fall semester of 1997 are mostly traditional age, predominately female, come from all college majors, have low ACT scores, low GPA's and have earned few college credit hours.

These conclusions are based on the following findings of the study. The mean age of the students on first time scholastic drop is 21.97; students are 62.2% female and 37.8% male; 75 college majors were reported; and ACT scores ranged from 16.28 in math to an 18.26 in reading. The Total Group’s beginning cumulative GPA mean is .957 and the R&R Group’s mean beginning cumulative GPA is 1.14. The mean number of college credit hours is 18.99 for the Total Group and 23.13 for the R&R Group.

These findings are supported by the study of Cooper (1991). Cooper investigated the factors that contributed to the academic probation of students at the College of Bahamas and found students on academic probation were 66% female. Cooper also identified low academic ability as a characteristic of student who had not performed well academically. Brawner’s (1996) review of factors associated with reasons students leave college reported that students between the age of 20 to 24 were more likely to drop out.
Based upon these findings and conclusions the researchers recommends that programs should be developed that address this population when they are first placed on academic probation. Intervention programs should provide study skills help, and academic advising that will assist students with their adjustment to college academic demands.

Objective 2: Those students who self selected to participate in the Remediation and Retention Program are no different than the Non Participant Group on the variables age, gender, and ACT scores. The Remediation and Retention Group has a significantly higher beginning cumulative GPA, has previously earned more college credit hours than the Non Participant Group and has a statistically significant higher cumulative GPA after treatment.

These conclusions are based on the findings from the study that produced the following statistical information. The comparison of age means resulted in t(25) = .799, p > .05. The Chi Square did not result in statistical significance for differences in gender, χ²(1, n = 129) = 2.15, p > .14. Difference was not found on the Chi Square for college major, χ²(4, n = 129) = 10.47, p > .03. The t-test of Independence did not find statistical significance between the Remediation and Retention Group and the Non Participant Group for the ACT composite score and the ACT sub scores. Composite t(1) = .991, p > .05; English t(-.97) = .332, p > .05; Math t(.72), .470, p > .05; Reading t(-.34), .731, p > .05; and Natural Science t(.81), .416, p > .05. The Mann Whitney U results found that the Remediation and Retention Group had a significantly
higher beginning cumulative GPA than the Non Participant Group. The difference in the
two groups for number of college hours earned was $t(-3.43) = .001, \ p = .001$.

These findings are similar to Hamilton’s (1994). Hamilton conducted a study
designed to identify the effects of improving academic performance by placing students
in remedial classes, providing academic support services, providing counseling, and
tracking these students long term. Results of the study showed that the control group
and the treatment group were very similar demographically.

The researcher concludes that students with few college hours do not have as
much invested in their education and therefore may be more challenging to effect
positive academic change. Further, those students with higher GPA’s and more college
hours are more likely to continue their educational pursuit.

Objective 3: No relationship exists between the number of counseling
sessions attended and academic performance (as measured by GPA for the treatment
semester).

This conclusion was based on the findings from the Pearson Correlation
Coefficient of $p = 0$ indicating no correlation between the number of counseling
sessions attended and semester GPA for the students in the R&R Program.

These findings were similar to Donnangelo’s (1978) study that was designed to
evaluate the effects of a counseling program on the academic suspension rate of students
who were on academic probation. The results did not find a statistically significant
difference at the .05 level in the number of students who were able to improve their
academic standings to keep from being placed on academic suspension.
The researcher recommends that for others who conduct programs such as the Remediation and Retention Program, the number of counseling sessions does not seem to effect student academic performance. The number of counseling sessions should be dictated by the needs of the students.

Objective 4: Based on the findings, no difference was found in the semester GPA and attendance at the study skills seminar for the Remediation and Retention Group.

The Mann-Whitney reported mean a mean rank of 68.12 for those attending the study skills seminar and 5.15 for those students not attending the study skills seminar. The $U = 1213.5$, with a $p = .09$.

Recommendations based on this finding suggest that a one time Study Skills Seminar may not offer enough remediation. Study skills sessions may be more effective if taught as a one hour credit course over the course of a semester.

Objective 5: The Remediation and Retention Program is effective in helping students achieve a semester GPA of 2.0 or higher.

This conclusion is based on the results of 63 (48.5%) of the R&R Group ($n = 129$) attained a 2.0 or higher GPA for the treatment semester. Students improve their GPA as a result of intervention programs such as the Remediation and Retention Program. Therefore, the researcher recommends that programs such as the R&R program be continued.

These findings are similar to Lucas’s (1991) study that was intended to evaluate the effectiveness of an intervention program. Lucas reported that 73% achieved a GPA
for the treatment semester of 2.0 or higher and were able to continue the following semester. Schultz (1989) conducted a study at Oklahoma State University to determine the differences between academically successful and unsuccessful students in an intrusive academic advising program. Schultz reported that 48.5% of the students in the program obtained a 2.0 or higher GPA for the treatment semester. The findings were further supported by the findings of VanShelhamer & Water (1988). The study was conducted at Montana State University and was designed to assist students who were on academic probation. VanShelhamer et al. reported that 57% of the students in the program finished the seminar with a 2.0 or higher GPA. Fields (1995) conducted a study at Louisiana State University where he developed a program to retain and retrain undergraduate students who had GPA's below 2.0. Fields reported that 67% of the students in the program were eligible to continue their enrollment the semester following treatment.

**Objective 6:** The comparison of the students in the Remediation and Retention Program with the Non Participant Group on retention rate found that a statistically significant proportion of those student in the Remediation and Retention Program were still enrolled at the university two semesters after treatment.

This conclusion is based on the findings that 20.9% of the Remediation and Retention Group were still enrolled after two semesters compared to 7.7% of the students in the Non Participant Group. The Chi-Square results had a group value of 15.09, df = 1, \( p = .001 \).
Therefore, the researcher recommends that programs such as the R&R program continue to assist students to improve academic performance and promote continued academic progress.

Objective 7: The variables used to classify persisters on the discriminant analysis was not helpful in classifying which students would persist and could not be used with confidence to predict persistence.

This conclusion is based upon the findings of the discriminant analysis which did not successfully classify any of the students as persisters. While the percent of “group” cases correctly classified is 88.03%, a high positive correlation, (Hinkle, Wiersma and Jurs, 1988), no cases were successfully classified as persisters. GPA was the only variable that was significant in the classification of groups.

Similar results were found by a study conducted by Hall (1994) which was designed to investigate the validity of six predictors of academic success after dismissal and reentry. Hall reported that the only significant predictors of future academic success were GPA factors.

The researcher recommends that while this study identified only one variable that is effective in classifying persisters, GPA may be sufficient as a predictor of future success.

Discussion

The R&R Program was instituted as a result of declining enrollment and the resulting assessment for improvement of the areas where the university was losing students. Offering students who were placed on first time scholastic drop an opportunity
for readmission with support for success fit the beliefs and mission of the university. Students on first time scholastic drop were targeted, along with other areas, as an intervention that would not only benefit the university, but offer students the opportunity to get the help they needed in order to reach their academic goals. Counseling sessions and a Study Skills Seminar were the avenues selected to facilitate the remediation process.

The students who participated in the R&R Program self selected into the program with some sense of relief and excitement at the prospect of being allowed to continue their education uninterrupted. Most students expressed the need for help with their study skills and welcomed the chance for help in this area.

While statistical significance was not found in many areas, the impact of the program may not be easily assessed. Small sample size and large differences in sample size may have been contributing factors to the study not finding more statistical significance.

Two students have graduated with associate degrees since entering the Remediation and Retention Program, and two others are within nine hours of completing their associate degree program.

Limitations of the Research

The R&R Program was conducted at a small rural community college in Louisiana with open admission standards. The Study Skills Seminar and the Counseling session were conducted using the same counselor. This action strengthened the internal validity but weakened the external validity of the study. Self selection into the program
limited the ability of the researcher to establish control groups or to randomly assign groups to treatment. Therefore, the results of this research are to be generalized based upon the limitations under which the research was conducted and is the decision of the reader.

Recommendations for Further Research

The following recommendations for further research are suggested:

(1) This study should be replicated and expanded to include connecting students with advisors for follow-up meetings the semester following treatment.

(2) This study should be replicated with the addition of restricting the number of college credit hours to twelve until the student is off academic probation.

(3) This study should be replicated with the Study Skills Seminar expanded to a required one hour credit course.
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Booth, J. E. (1993). Outreach efforts as a way to increase student participation in the academic intervention program. *Dissertation Abstracts International, 55* 01B. (University Microfilms No. AAI9417613)


Boyd, V. (1996). *A summer retention program for students who were academically dismissed and applied for reinstatement* (Report No. CG 027 549). Maryland University, College Park: Counseling Center. (ERIC Document Reproduction Service No. ED 405 529)


Salisbury, A. M. (1979). An Evaluation of a model which was designed to increase college retention through the provision of counseling services. Dissertation Abstracts International, 41 06A. (University Microfilms No. AAI8028490)


Stewart, B. W. Jr. (1997). The effects of a freshman seminar course in student retention, academic success, and academic performance (Student development, college students). Dissertation Abstracts International, 58 (7). (University Microfilms No. AAI9801970)


Vukovich, T. J. (1982). The effectiveness of a probationary forum approach to retain academically dismissible university college students at the University of Akron. *Dissertation Abstracts International, 44* 01. (University Microfilms AAI8311454)


Date: October 15, 1997

To: Dr. Robert Cavanaugh  
Chancellor

From: Dee Slavant

I am requesting permission to use some of the tables and charts that were printed in the 1996 Fact Book in the background information section of my dissertation. There may be other information that I will need from Institutional Research. I am requesting permission to work with Dr. Corbat to access student information for the purpose of comparing and describing the total academic probation population and perhaps other descriptive information as needed.

[Signature]

[Signature]

10-16-97

X.C.: Carol Corbat
December 17, 1997

FIELD(Title) FIELD(First Name) FIELD(Last Name)
FIELD(Street)
FIELD(City, State, Zip)

Dear FIELD(Title) FIELD(Last Name)

We recently mailed the final grade reports for the Fall 1997 Semester. In your report, we informed you that you have been suspended (dropped) for academic reasons from Louisiana State University at Alexandria. Students suspended for the first time are required to remain out of school for one regular semester. (See your grade report for the length of your suspension). In the past, an academic suspension, whether first or subsequent, meant mandatory non-attendance for the period of the suspension; however; the LSUA regulation that governs re-entry of students who have been suspended for the first time was recently changed. An excerpt from the new regulation follows:

A student dropped for the first time for academic reasons at LSUA may register the following semester or summer session for at least 3 but no more than 6 hours of course work for credit. If this course work is completed with at least a “C” average (2.0), the student will be allowed to continue in school. If, however, the course work is completed with less than a “C” average (2.0), the student will incur a second academic drop and will be dropped from the university for one calendar year.

Students who wish to exercise this option must contact the Office of Admissions and Records to request permission no later than two working days prior to regular registration for that semester or session. Re-admission may be delayed or denied at the discretion of the Registrar and Assistant to the Vice Chancellor for Academic Affairs.

As you review your particular situation and make your decision on whether or not to return to school next semester, please remember that an academic suspension is not intended to punish you. Consider it an opportunity for you to improve your future academic performance so that you do not continue on a track that could prevent you from graduating. If you decide to remain out of school for the duration of your
suspension, you should use the time to re-evaluate your goals and priorities and to resolve any personal or financial problems you may have. You might also want to visit the LSUA Counseling Center and speak with our career and/or personal counselors.

If you have questions regarding your academic standing, you may contact Mr. Richard Averitt, Registrar, at (318) 473-6413.

Sincerely,

Randall H. Stovall, Ph.D.
Vice Chancellor for Academic Affairs
APPENDIX D
PETITION FOR READMISSION

Louisiana State University at Alexandria
Petition for Readmission - 1st Drop

Name: ________________________________ Social Security No.: __________

Division: ____________________________ Major: ______________________

Advisor: ____________________________________________________________

1. Why should you be allowed to enroll? You may attach information such as your
advisor’s or division head’s recommendation, or a statement from your employer.

2. How do you plan to improve your academic performance?

3. What courses would you like to take?
   Course Title  Number

   ___________________________________________________________

   ___________________________________________________________

   ___________________________________________________________

Remarks: _______________________________________________________

Recommendations: __________________________________ Date: ______
   Counseling Center Signature

Approval: __________________________________ Date: ______
   Registrar and Assistant to the Vice-Chancellor for Academic Affairs

Remarks: _______________________________________________________

Recommendations: __________________________________ Date: ______
   To be Retained in Student File
APPENDIX E
READMISSION POLICY

Readmission of Students Dropped from the University

Students who have been dropped from the rolls of the University may be considered for re-admission in accordance with the following rules:

1. A student dropped for the first time for academic reasons at LSUA may register the following semester or summer session for at least 3 but no more than 6 hours of course work for credit. If this course work is completed with at least a “C” average (2.0), the student will be allowed to continue in school. If however, the course work is completed with less than a “C” average (2.0), the student will incur a second academic drop and will be dropped from the university for one calendar year.

Students who wish to exercise this option must contact the Office of Admissions and Records to request permission no later than two working days PRIOR to regular registration for that semester or session. Re-admission may be delayed or denied at the discretion of the Registrar and Assistant to the Vice Chancellor for Academic Affairs.

The student’s transcript will carry a notation stating that the student was dropped but conditionally readmitted on probation, based on this option.

When students register early for the following semester and are subsequently dropped for academic reasons, the classes for which they registered are automatically canceled.

2. Students who have been dropped more than once for academic reasons at LSUA must remain out of the University for at least one calendar year. They may then apply for readmission. Re-admission may be delayed or denied at the discretion of the Vice-Chancellor for Academic Affairs.

3. A student who has been suspended for academic reasons may not obtain credit toward a degree at LSUA with credits earned from another institution during the period of ineligibility to register at LSUA. However, with the approval of the student’s Division Head and/or the Vice-Chancellor for Academic Affairs, the student may register for audit in regular courses offered at LSUA or for non-credit in correspondence courses offered by regionally accredited universities.
APPENDIX F
READMISSION POLICY CONTINUED

4. Students re-admitted to LSUA after being dropped for academic reasons will be on scholastic probation when they return and will remain on probation until their overall average and their LSU system average is 2.0 or better.

I have read and discussed this policy with the Registrar and fully understand all the requirements concerning my conditional readmission to LSUA.

Student’s Signature: ____________________________ Date: __________
Dear FIELD(Title) FIELD(Last Name):

As per the contract signed to re-enter LSUA, you agreed to participate in a Study Skills Seminar. I has been scheduled for FIELD(Day of the week) FIELD(Month, Day, Year) from 1:00 p.m. in Room 217 in the Student Center.

I look forward to seeing you there.

Sincerely,

Dee Slavant
Director, Student Services
APPENDIX H
COUNSELOR'S COMMENT SHEET

Counselor's Comment Sheet

Name: _________________________________  Social Security No. _________________
Division: ________________________________  Major: _________________________
Study Skills Session: Date _________  Group ________  One-on-one session ______

Session 1  Date: ________________

Session 2  Date: ________________

Session 3  Date: ________________
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APPENDIX K
CODING OF COLLEGE MAJORS

College Majors: ACCT=1; AGBU=2; AGBUS=3; AGRUN=4; ALPNP=5;
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PPHAR=58; PSYCA=59; PT=60; PVMED=61; RADTECH=62; RC=63; REL=64;
RT=65; RTH=66; SCIUN=67; SEMTH=68; SOCCL=69; SOWK=70; SPAN=71;
SPCM=72; THTR=73; UNDEC=74; WILD/F=75
VITA

Dee Slavant graduated from the University of Tulsa in 1972 with a bachelor of science in Education. In 1983, she completed a master of education degree in Counseling from Louisiana State University & Agricultural and Mechanical College. She received the degree of Doctor of Philosophy in Vocational Education at Louisiana State University and Agricultural and Mechanical College, December, 1998.

The focus of her life has been on students and learning. She has taught school for over twenty years with experience that spans kindergarten through college. Some of her noted accomplishments are: Established and directed a school for handicapped children; Designed and implemented a Work/Study program for high school students with learning problems; and Designed and implemented complete Counseling Centers at both the high school and college level.

Ms. Slavant is a Louisiana Licensed Professional Counselor and a Nationally Certified Counselor. She is currently Director of Student Services at Louisiana State University at Alexandria where her duties include: Counseling Center, Student Organizations and Publications, ADA Coordinator, and Tutoring Programs.
DOCTORAL EXAMINATION AND DISSERTATION REPORT

Candidate: Dee Anna Slavant

Major Field: Vocational Education

Title of Dissertation: Remediation and Retention of Students On First Time Scholastic Drop (R&R)

Approved:

[Signatures]

EXAMINING COMMITTEE:

[Signatures]

Date of Examination:

October 1, 1998