

## DOCUMENT RESUME

ED 443 373

HE 033 138

AUTHOR Moorhouse, Dian R.  
TITLE A Cross-Sectional Study of Graduation Rates by Major for the NSU 1994 Student Cohort.  
INSTITUTION Nova Southeastern Univ., Ft. Lauderdale, FL. Research and Planning.  
REPORT NO NSU-RP-R-00-07  
PUB DATE 2000-07-00  
NOTE 74p.; For related NSU documents, see HE 033 139-140.  
PUB TYPE Numerical/Quantitative Data (110) -- Reports - Research (143)  
EDRS PRICE MF01/PC03 Plus Postage.  
DESCRIPTORS \*Academic Persistence; \*College Graduates; College Outcomes Assessment; Comparative Analysis; Degrees (Academic); Graduate Study; Graduation; Higher Education; \*Outcomes of Education; School Holding Power; Tables (Data); \*Time to Degree; Trend Analysis; Undergraduate Students  
IDENTIFIERS \*Nova Southeastern University FL

## ABSTRACT

This study provides a cross-sectional analysis of graduation rates and persistence for enrollees in major degree programs at Nova Southeastern University (NSU) (Florida). The population for the study comprised all students (n=13,887) enrolled in extant majors as of fall 1994. The study was designed to identify two subgroups for each major: students who had graduated as of August 31, 1999 and students who were still enrolled. Findings reflect a wide range of both graduation rates and overall rate of persistence. Graduation rates for 56 majors range from 32 to 100 percent; majors reflecting the highest overall rates of persistence (90 percent or higher) were those that prepare students for careers in the professions. Sections of the report are titled: introduction (overview of recent studies, longitudinal studies, cross-sectional studies, comparison of NSU's performance with national trends); definition of the study population; methodology; data organization; results and analysis of findings; summary; and implications for further study. Twenty-one data tables are grouped as follows: majors by academic unit and level; rate of persistence by major, by degree level, and by academic unit; and comparative rates of graduation by major, by degree level, and by academic unit. (Contains 26 references.) (CH)

**A CROSS-SECTIONAL STUDY OF GRADUATION RATES BY MAJOR  
FOR THE NSU 1994 STUDENT COHORT**

**Dian R. Moorhouse  
Director, Planning and Accreditation**

**Nova Southeastern University  
Research and Planning**

**Report 00-07**

**July 2000**

**BEST COPY AVAILABLE**

U.S. DEPARTMENT OF EDUCATION  
Office of Educational Research and Improvement  
EDUCATIONAL RESOURCES INFORMATION  
CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.

Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

*D. Moorhouse*

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

# A CROSS-SECTIONAL STUDY OF GRADUATION RATES BY MAJOR FOR THE NSU 1994 STUDENT COHORT

Dian R. Moorhouse  
Report 00-07

Director, Planning and Accreditation  
July 2000

## EXECUTIVE SUMMARY

Over the last several years, NSU has compiled and analyzed a substantial set of data regarding retention and graduation rates. Studies have examined these rates from various perspectives, focusing on individual academic units, the overall undergraduate and graduate programs, on-campus vs. off-campus enrollees, and first-time in college freshman. The current study examines what we have learned from these prior efforts and is intended to complement and extend the earlier studies by focusing analysis, for the first time, at the level of the major. It provides a cross-sectional analysis of rates of graduation and persistence for all enrollees in extant major degree programs as of Fall Term 1994. The impetus for the study was two-fold: the generation of previously unavailable data regarding student achievement at the level of the major that had been compiled for regional accreditation purposes, and the interest of administration in on-going examination of graduation and persistence rates.

In order to meet the accreditation criteria of the Commission on Colleges of the Southern Association of Colleges and Schools relative to institutional effectiveness at the level of the major, NSU has identified multiple measures that are applicable in assessing student achievement. Although measures of student achievement that are applied to specific programs vary considerably based on unique aspects of individual programs, graduation rate is identified as a common measure. Therefore, for all academic programs in existence as of Fall Term 1994, data regarding graduation and continued enrollment were compiled.

The population examined for this study comprises all students enrolled in extant majors as of Fall 1994 ( $N = 13,887$ ); accordingly, students included in the study will have enrolled for the first time during any one of a number of terms over a period of several years, prior to and including the Fall 1994 term. The study was designed to identify for each major program two sub-groups that partially comprise the overall population of enrollees in those majors as of the Fall 1994 term: students who had graduated as of August 31, 1999, and students who were still enrolled as of that date. Both the total number of students in each category and the percentages of total 1994 enrollment represented by those numbers were calculated. These numbers and percentages were then combined for each major program to generate statistics reflecting an overall rate of persistence toward graduation for the major. Program performance relative to these rates was rank ordered from highest to lowest. Data and analysis also are presented in ranked order by rate for each academic unit and by degree level. To provide added perspective, the study overviews a number of longitudinal and cross-sectional studies conducted by NSU in recent years that examine graduation rates for specifically defined cohorts. In addition, data regarding graduation rates at the national and state level are presented to provide benchmarks.

The findings from this study reflect a wide range among the majors extant as of Fall Term 1994 in both the graduation rate and the overall rate of persistence toward graduation. The graduation rates for the 56 majors range from 32% to 100%. When examined in the aggregate, of the 13,887 students enrolled in those majors as of Fall Term 1994, 66% had graduated by Fall Term 1999 and an additional 8% were still enrolled, reflecting an aggregate overall rate of persistence toward graduation of 74%. The majors reflecting the highest overall rates of persistence toward graduation (90% or higher) all are majors that prepare students for careers in the professions. For 21 of the 56 majors, the overall rate of persistence is below 50%, with only one major having graduated no students. A significant factor in generating wide differences in rates is the considerable range in the student enrollment for the 56 majors, from 12 to 1,985. Majors for which there were 10 or fewer enrollees as of Fall Term 1994 were excluded from the study; however, even low-end enrollments of 11-20 may be responsible for skewing the rate data, and this should be taken into account in drawing conclusions regarding comparative rates.

When examined by degree level, not unexpectedly, the doctoral-level majors evidenced the lowest range in rates of overall persistence, compared with those for the bachelor's and master's levels (61 and 56 percentage points, respectively), as well as the highest overall rate of persistence, compared with those for the bachelor's and master's levels. For none of the doctoral majors is the overall rate of persistence less than 50%; however, the graduation rate is below 50% for 10 of those majors, reflecting, as indicated, predictable extended matriculation periods for doctoral students. For the 18 bachelor's level majors, the graduation rate is below 50% for 7 majors, while the overall rate of persistence toward graduation is less than 50% for only 5 of the majors. At the master's level, the graduation rate is below 50% for only two of the 21 majors.

Graduation rates and overall rates of persistence toward graduation also were examined by academic unit. Graduation rates range from 31% to 92%, or 61 percentage points. The overall rate of persistence toward graduation is above 50% for all of the units.

The study suggests further exploration is needed of graduation and overall persistence rates that is focused on potential causative factors in disparities among graduation and overall persistence rates. In particular, the study suggests that it may be useful to examine differences among the academic units, as well as among individual academic programs within units, in the processes and procedures applied to tracking students through their programs and interventions extended to students at critical junctures along the way (such as, but not limited to, academic advising, assistance with financial aid, opportunities to enrich educational experience through interactions with faculty outside the classroom, and assistance early on with long-range career planning). In addition, it may be useful to investigate national and discipline-specific trends, including, but not limited to, the prospective obsolescence or significant modification of certain disciplines which may impact student decisions regarding persistence and, therefore, graduation and attrition rates.

# Table of Contents

	Page
Executive Summary .....	ii
List of Tables .....	v
Introduction and Purpose of the Study .....	1
Overview of Recent Previous Studies of Graduation Rates at NSU .....	1
Longitudinal Studies .....	1
Cross-Sectional Studies .....	3
Placing NSU's Performance in the Context of National Concerns and Trends Regarding the Outcomes of Student Learning .....	4
Impetus for Examining Graduation Rate by Major .....	9
Definition of Population .....	9
Methodology .....	9
Organization of the Data .....	10
Results and Analysis of Findings .....	11
Summary of Findings .....	15
Implications for Further Study .....	16
Tables .....	17
References .....	48

## List of Tables

Table	Page
Table 1: Extant Majors By Academic Unit as of Fall Term 1994 .....	18
Table 2: Extant Majors By Level as of Fall Term 1994 .....	19
Table 3: Rate of Persistence Toward Graduation by Major For All Majors Extant as of Fall Term 1994 .....	21
Table 4: Rate of Persistence Toward Graduation For All Bachelor's Degree Level Majors Extant as of Fall Term 1994 .....	25
Table 5: Rate of Persistence Toward Graduation For All Master's Degree Level Majors Extant as of Fall Term 1994 .....	26
Table 6: Rate of Persistence Toward Graduation For All Doctoral Degree Level Majors Extant as of Fall Term 1994 .....	28
Table 7: Summary of Rates of Persistence Toward Graduation by Level For Fall Term 1994 Cohort as of Fall 1999 .....	29
Table 8: Rate of Persistence Toward Graduation for the Center for Psychological Studies Majors Extant as of Fall Term 1994 .....	31
Table 9: Rate of Persistence Toward Graduation for the Farquhar Center for Undergraduate Studies Majors Extant as of Fall Term 1994 .....	32
Table 10: Rate of Persistence Toward Graduation for the Fischler Graduate School of Education and Human Services Majors Extant as of Fall Term 1994 .....	33
Table 11: Rate of Persistence Toward Graduation for the Health Professions Division Majors Extant as of Fall Term 1994 .....	34
Table 12: Rate of Persistence Toward Graduation for the Oceanographic Center Majors Extant as of Fall Term 1994 .....	34
Table 13: Rate of Persistence Toward Graduation for the School of Business and Entrepreneurship Majors Extant as of Fall Term 1994 .....	35

Table 14: Rate of Persistence Toward Graduation for the School of Computer and Information Sciences Majors Extant as of Fall Term 1994 .....	36
Table 15: Rate of Persistence Toward Graduation for the School of Social and Systemic Studies Majors Extant as of Fall Term 1994 .....	37
Table 16: Rate of Persistence Toward Graduation for the Shepard Broad Law Center Majors Extant as of Fall Term 1994 .....	37
Table 17: Summary of Rates of Persistence Toward Graduation by Academic Unit as of Fall Term 1994 .....	38
Table 18: Comparative Rates of Graduation and Persistence for the Fall Term 1993 Cohort as of Fall Term 1998 and the Fall Term 1994 Cohort as of Fall Term 1999 .....	40
Table 19: Rate of Persistence Toward Graduation by Major For All Majors Extant as of Fall Term 1994 with an Enrollment of at Least 10 .....	42
Table 20: Rates of Persistence Toward Graduation by Degree Level For All Majors Extant as of Fall Term 1994 with an Enrollment of at Least 10 .....	44
Table 21: Rates of Persistence Toward Graduation by Academic Unit For All Majors Extant as of Fall Term 1994 with an Enrollment of at Least 10 .....	46

## INTRODUCTION AND PURPOSE OF THE STUDY

Throughout much of the last two decades, in response to demands for accountability by accrediting bodies, governmental entities, and various additional stakeholders, institutions of higher education increasingly have focused attention on student achievement. One traditional measure of student achievement in an educational program is graduation rate. This rate, coupled with data regarding the continued enrollment of matriculated students, provides perspective on the overall rate of student persistence toward graduation. Over the last several years, NSU has compiled and analyzed a substantial set of data regarding retention and graduation rates. Studies have examined these rates, from various perspectives, focusing on individual academic units, the overall undergraduate and graduate programs, on-campus vs. off-campus enrollees, and first-time in college freshman.

The current study examines what has been learned from these prior efforts and is intended to complement and extend the earlier studies by focusing analysis, for the first time, at the level of the major. The study provides a cross-sectional analysis of rates of graduation and persistence for all enrollees in extant major degree programs as of Fall Term 1994.

### Overview of Recent Previous Studies of Graduation Rates at NSU

The assessment of graduation rates may take several forms, most typically either a retrospective longitudinal study of the current status of a cohort of students enrolled for the first time in a program of study during a specified term, or a cross-sectional study of the current status of all enrollees in a program during a specified term, regardless of the term of initial enrollment. NSU has conducted a number of longitudinal and cross-sectional studies in recent years that examine graduation rates for specifically defined cohorts. These are highlighted below.

#### LONGITUDINAL STUDIES

##### ▶ **Longitudinal Studies of Graduation and Persistence Rates for Undergraduate Programs**

In June 1997, the Office of University Research and Planning reported on a study of rates of graduation and persistence for first-time in college freshman based on student cohorts entering the university for the first time in Fall 1989, 1990, and 1991. This study, *Undergraduate Persistence and Rates of Graduation: A Cohort Analysis of First-Time in College Freshman* (Atherton, 1997b), was designed to provide baseline data for compliance with mandates of the Student Right-to-Know (SRK) Act, and to examine beyond those dictates the composition of undergraduate cohorts at NSU. With regard to undergraduate graduation and persistence rates, separate rates were compiled for traditional college-age students and older age students in order to assess differences in rates potentially attributable to differences in the characteristics of these two groups.

Study results indicated an aggregate six-year graduation rate of 26%. There were significantly different graduation rates for younger and older student populations. The six-year graduation rates for the traditional-age cohorts for the three years studies ranged from 30-33%, while rates for the older age cohorts ranged from 11-18%.

In December 1999, a second study of freshman meeting the SRK criteria was conducted to address trends in six-year graduation rates for cohorts entering NSU between Fall 1989-1992 and to assess the progress of SRK cohorts that entered NSU in fall 1993-95. Data indicated a six-year graduation rate for the 1989-92 SRK cohorts of 30%, when examined in the aggregate, although five-year data for the 1993 SRK cohort reflects a rate of 43% (Atherton, 1999).

A significant factor impacting applicability of the data from these studies is the small size of the populations; first-time-in-college freshman comprise a very small sub-set of the overall undergraduate population at NSU. Consequently, these studies were not intended to generate a picture representative of the overall student body or even the undergraduate program. Nevertheless, the assessments of this sub-set of the undergraduate population; not previously examined; were deemed useful contributions to the overall base of data.

#### ▶ **Longitudinal Studies of Graduation and Persistence Rates for Graduate Programs**

In November 1997 and June 1998, two longitudinal studies were conducted by the Office of University Research and Planning that examined, for the first time on a formal basis, retention and graduation rates for NSU's graduate programs. The first study, *Persistence and Rates of Graduation of Students Pursuing Graduate Degrees: Students Entering the Fischler Center for the Advancement of Education and the School of Business and Entrepreneurship in Fall 1990* (Atherton, 1997a) focused solely on enrollees in the graduate programs of two academic units, the Fischler Graduate School of Education and Human Services (FGSEHS) and the School of Business and Entrepreneurship (SBE), while the second study, *Persistence and Rates of Graduation of Students Pursuing Graduate Degrees II: Students Entering Graduate Programs in Fall 1990* (Atherton, 1998) focused on all other graduate programs, excluding those offered through the Health Professions Division (HPD). Both studies examined graduation and persistence rates for Fall 1990 first-time enrollees as of June 30, 1998.

These studies revealed a combined persistence and program completion rate (graduated or still enrolled) of 70% when examined in the aggregate for all enrollees in graduate programs (excluding those of HPD). The rate for master's programs was slightly higher at 71%, and the rate for doctoral programs was 67%. The data revealed further that more than three-quarters of master's students who had graduated had done so within three years from initial enrollment and 80% of doctoral students had completed their degree within five years; university-wide, 63% of graduate students had completed their degree within six years.

## CROSS-SECTIONAL STUDIES

### ▶ **Cross-Sectional Study of Graduation and Persistence Rates for Campus-Based vs. Distance Programs**

In February 1999, a study (*Matriculation Status of Nova Southeastern University's Fall Term 1993 Cohort at the Beginning of Fall Term 1998: Breakout Analyses for Campus-Based Students and Distance Education Students*) was conducted that compared the matriculation status of all distance and campus-based students enrolled in centers offering courses at distance sites in Fall Term 1993 as of Fall Term 1998 (MacFarland, 1999e). This report compared the rates of persistence toward graduation for campus-based vs. distance education students enrolled in the following academic units: the Center for Psychological Studies, the Farquhar Center for Undergraduate Studies, the Fischler Graduate School of Education and Human Services, and the School of Business and Entrepreneurship.

The study revealed that distance education students had a statistically significantly greater frequency ( $p \leq .05$ ) of successful matriculation, i.e., graduated or still enrolled, than their campus-based counterparts (73% and 71%, respectively). This finding was comparable for the graduation rate (69% campus-based and 72% distance education). However, this finding was not maintained for all breakout analyses. While the general finding held true overall for students at the undergraduate (65% campus-based and 75% distance education) and master's levels (74% campus-based and 78% distance education), a reverse picture was revealed for doctoral students overall (72% campus-based and 69% distance education), although in the Center for Psychological Studies the finding was sustained.

### ▶ **Cross-Sectional Studies of Graduation and Persistence Rates by Academic Unit**

In late Spring 1999, four studies were published, each providing a cross-sectional analysis of the matriculation status as of Fall Term 1998 for Fall Term 1993 students in an individual academic unit offering multiple degree programs:

- *Matriculation Status of Fall Term 1993 Center for Psychological Studies Students by the Beginning of Fall Term 1998* (MacFarland, 1999a).
- *Matriculation Status of Fall Term 1993 Farquhar Center for Undergraduate Studies Students by the Beginning of Fall Term 1998* (MacFarland, 1999b).
- *Matriculation Status of Fall Term 1993 Fischler Graduate School of Education and Human Services Students by the Beginning of Fall Term 1998* (MacFarland, 1999c).
- *Matriculation Status of Fall Term 1993 School of Business and Entrepreneurship Students by the Beginning of Fall Term 1998* (MacFarland, 1999d)

The academic units included on the study were those offering classroom-based teaching, with direct, face-to-face contact between teacher and student; thus, programs offered exclusively online were excluded. These units were: the Farquhar Center for Undergraduate Studies, the Fischler Graduate School of Education and Human Services, the School of Business and Entrepreneurship, and the Center for Psychological Studies.

Whereas previous matriculation studies had collapsed all distance education students into one common grouping, a major contribution from these studies was the examination of data for individual distance education sites. Results of these studies differed for each academic unit, e.g., for the Farquhar Center, the offerings of which are at the undergraduate level exclusively, results reflected that distance education students had a greater likelihood of having graduated.

With respect to these findings, it is important to note that cross-sectional cohorts should always show a higher graduation level than first-time enrollee cohorts, because cross-sectional cohorts comprise students who commenced studies at various times over a period of several years and a significant number of them will have progressed far along in their program toward graduation.

The data below summarize findings from the studies of graduation and persistence rates at NSU that are described above:

Longitudinal Data (Atherton, 1999, 1998, 1997a, 1997b)	Graduation Rate	Persistence Rate
First-time in college freshman graduating within six years of entry		
All students in cohort	26-31%	28-32%
Division: Professional and Liberal Studies students	30-33%	32-35%
Career Development students	11-33%	14-33%
Graduate students	63%	70%
Master's program	69%	71%
Doctoral Programs	48%	67%
<b>Cross-sectional data (MacFarland, 1999a, 1999b, 1999c, 1999d, 1999e)</b>		
Distance education students	72%	73%
Bachelor's students	75%	75%
Master's/Educational Specialist students	78%	78%
Doctoral students	65%	66%
Campus-based students	69%	71%
Bachelor's students	63%	65%
Master's students	74%	75%
Doctoral students	72%	74%

## **Placing NSU's Performance in the Context of National Concerns and Trends Regarding Student Achievement Outcomes**

During the last quarter century, considerable attention has been devoted to the effectiveness of the nation's institutions of higher education in delivering on their purported mission of educating young adults and preparing them for the future. Pressure in this direction has been imposed on institutions

from a variety of sources, including state and national legislators, accrediting bodies, various advocacy groups, and the public at large. In their 1997 report entitled, *Student Outcomes Information for Policy Making*, the National Postsecondary Education Cooperative (NPEC) noted

Currently, many members of Congress, governors, state legislators, top business executives, and others consider the information currently available on America's postsecondary institutions to be inadequate for evaluating the quality of the education being delivered and for making decisions on policy or the expenditure of public funds...A number of forces have combined to increase the pressure on administrators and faculty members in public institutions to demonstrate the educational effectiveness of their institutions. (p.1)

Underscoring the fact that such concerns have been sustained for several decades, the NPEC report cites comments made by Lenning in his 1977 report, *The Outcomes Structure: An Overview and Procedures for Applying it in Postsecondary Education Institutions*:

"In this 'age of accountability,' administrators and others have been especially concerned about educational outcomes and their measurement. Postsecondary institutions...are also being called on to provide factual evidence that they and their programs are providing the benefits that were intended, and that these outcomes are being produced in a cost-effective manner." (NPEC, p.1)

Concern with educational quality has for a number of years been reflected pervasively in the criteria and standards of the various regional and professional bodies that accredit entire institutions of higher education and/or individual academic programs, divisions, or departments of those institutions. For example, the Southern Association of Colleges and Schools - Commission on Colleges (SACS-COC), through which NSU is accredited, notes in the *Criteria for Accreditation*:

Accreditation is concerned primarily with the improvement of educational quality throughout the region and ensuring to the public that institutions meet established regional standards (p.1)...Accreditation by the Commission on Colleges is the result of thorough and careful evaluation of the educational quality of the institution (p.2).

Institutions accredited by SACS-COC are required to establish and maintain systematic processes for assessing institutional effectiveness across the spectrum of their programs, operations, and services. This requirement undergirds the commitment of SACS and its institutional members to a continuous pursuit of quality. The *Criteria for Accreditation* states with regard to institutional effectiveness:

The concept of institutional effectiveness is at the heart of the Commission's philosophy of accreditation and is central to institutional programs and operations. It pervades the *Criteria for Accreditation*. This concept presumes that each member institution is engaged in an ongoing quest for quality and can demonstrate how well it fulfills its stated purpose. The quality and effectiveness of education provided by each member institution are major considerations in accreditation decisions (p.19).

Similar themes and concerns are reflected in the language of the criteria and standards set forth by other regional and professional accrediting bodies, with varying degrees of prescription regarding the manner of implementation. Overall, the concept of institutional effectiveness has moved the accreditation process from compliance with checklist type standards, such as number of volumes in the library, that characterized the process during the third quarter of the century, toward a more substantive and meaningful assessment of quality.

One of the derivative concerns evolving from the institutional effectiveness movement has been a focus on the outcomes of student learning. In evaluating the efficacy of academic programs, evaluators increasingly have addressed measures to assess such outcomes. A critical question has been how best to define outcomes. Outcomes defined through various demonstrations of student achievement have been a key focus of this effort, and the rate of student persistence has been identified as a key measure, though certainly not the only measure, of student achievement in the aggregate for entire programs, colleges, or institutions. As part of the intensive focus on persistence, considerable scholarly attention has been devoted to student attrition and retention. In explaining this trend, Tinto noted:

Research on student retention in the United States has grown tremendously since the mid-1970s. A predicted decline in the numbers of secondary-school graduates and a continuing concern over issues of equity have been at least partially responsible for a renewed interest in the individual and institutional forces that shape student attrition from higher education. (1992, p.1697)

Retention of students through completion of their degree programs is a central concern of faculty and administrators, as well as other stakeholders, in the nation's institutions of higher education. A related and certainly compounding factor impacting retention is average completion time. It has been widely noted in the literature that the length of time students take for completion of a baccalaureate degree has been increasing steadily over the last 35 years (American College Testing Service, 1999; Consortium for Student Retention Data Exchange, 1998; Dennis, 1998; U.S. Department of Education, 1998; Lucas, 1994; Wheat, 1994; Losak, 1986). Various factors contributing to this trend have been identified, including, among numerous others, delays in initial enrollment, competing social and economic demands confronting older students, changes in institutions or majors, periods of 'stopping out,' and reduced course loads imposed by financial, educational, or social needs (American Association of State Colleges and Universities, 1997; Lucas, 1994; Tinto, 1992; U.S. Department of Education, 1998, 1993, Wheat, J., 1994; Losak, 1986).

The lengthening completion time is at least partially responsible for the fact that the research norm now is to apply a five-to-six-year window from initial freshman enrollment in generating graduation rate data. Specifically, the federal government in its Student-Right-To-Know Act, as modified, has established a six-year window, more accurately reflecting student behavior. These historic developments and current trends support NSU's use of five and six-year windows in studying student persistence.

NSU's students, like students enrolled in other institutions across the state of Florida and throughout the country, confront similar challenges to those noted above in pursuing completion of their degree

programs. In order to place NSU's student persistence data in perspective, therefore, it is important to examine this data in the context of statewide and national benchmarks. Data from the National Center for Education Statistics (U.S. Department of Education, 1998, 1993) and the Consortium for Student Retention Data Exchange (CSRDT) at the University of Oklahoma (CSRDT, 1998), among other sources, regarding completion rates for entering freshman reveal the significance of the increase in completion time. Citing findings from earlier studies, the CSRDT reported in 1998 that approximately one-half of freshman who enrolled in 1966 obtained their undergraduate degree within four years, while for those students entering college in 1982, this figure had decreased to approximately one-third. Data that the CSRDT generated from 232 member institutions regarding students who entered college between 1989 and 1991 revealed a 26% four-year completion rate and underscored the continued downward trend in four-year completion rates.

A comparable trend was reflected in NCES historical data for this period. Data generated from college graduate surveys conducted by the NCES, revealed the following four-year completion rates: 45.4% for freshman entering college in 1977; 34.5% for freshman entering college in 1986, and 31.1 for freshman entering college in 1990 (U.S. Department of Education, 1993).

Data from NSU's 1999 longitudinal study of undergraduate first-time in college freshman, cited previously, revealed an aggregate six-year graduation rate of 30% (Atherton, 1999). This rate was shown to compare unfavorably with a national undergraduate six-year graduation rate of 45% across all colleges and universities and 72% for private institutions reported in a 1996 Higher Education Research Institute study cited in the report.

With respect to Florida statewide data, NSU's graduation rate was reported by Atherton (1999) to be significantly lower than that of 61% reported in 1995 for the State of Florida public institutions of higher education and 47% for private institutions (i.e., member institutions of the Independent Colleges and Universities of Florida and the University of Miami). Finally, the report indicates that among the 20 member institutions of the Independent Colleges and Universities of Florida, NSU placed 18<sup>th</sup> in the proportion of Fall 1995 undergraduates that were first-time in college entering freshman, indicating that the large majority of undergraduates transfer into the institution and, therefore, have already made at least some progress toward a bachelor's degree prior to enrollment, a factor that would be expected to contribute toward a higher graduation rate.

In keeping with declining four-year graduation rates, national five-year graduation rates at four-year colleges and universities have declined steadily over the last two decades. Rate trends at five-year intervals, derived from American College Testing (ACT) data (1999), are presented below:

	1983	1988	1993	1998
Public colleges and universities	52.2	48.0	46.3	42.9
Private colleges and universities	59.5	58.1	57.7	56.2
All colleges and universities	57.5	55.2	54.3	52.1

Graduation and persistence rates at the graduate level have been difficult to pinpoint. A review of the literature reflects that there is a paucity of data concerning such rates and that the results are tenuous at best. This is particularly so with respect to doctoral degree programs. In his seminal study, *Graduation Education in the United States*, Berelson explored attrition rates in graduate

programs. Results from this study, conducted among colleges and universities nationwide, revealed an approximate attrition rate of 20%, as assessed by graduate faculty, and 35-40%, as assessed by graduate school deans (1960). A National Research Council study on graduate program attrition in the sciences and humanities places these figures in perspective in noting "...these are impressionistic numbers, based on anecdotal evidence rather than on quantitative analysis, and are likely to be low" (National Research Council, 1996). The Council notes, however, the lack of significant attention to graduate attrition rates since that study:

Not since Berelson's study have national estimates from doctoral programs been generated. Instead, analysts turned their attention to a study of factors thought to influence attrition, including length of time-to-degree and the social-psychological effects of changes in the academic environment on student outcome. (p. 8)

Although the National Research Council, in conducting the 1996 study, commissioned a substantial body of national data sets to examine attrition and degree completion at the graduate level, and analyzed relevant data from studies published over the previous decade, the results of the study were inconclusive. While concluding that there exists a "distinct body of knowledge" (p. 1) regarding doctoral program attrition, the Council's Ad Hoc Panel on Graduate Attrition Advisory Committee drew the following additional conclusion from the study of compiled data and information:

Because of the diversity of graduate programs, however, and the need to collect data on attrition from the records of individual institutions, the panel also concludes that it is not feasible to design a system to produce national estimates of attrition from Ph.D. programs. A few academic institutions have recently undertaken the longitudinal analyses that are needed to ascertain rates of attrition and degree attainment at their own institutions. Some movement is also evident in the educational community to develop profiles of graduate attrition at selected groups of institutions. These studies are not expected, however, to yield national estimates of attrition from graduate studies in U.S. universities as a whole. (p. 1)

Reservations regarding the dearth of hard data on graduate-level graduation rates notwithstanding, an operational "rule of thumb" appears to be emerging in the literature that sets the graduation rate for graduate programs at approximately 50% (Kehrhahn, M., Sheckley, B., & Travers, N., 1999; Nerad, June, & Miller, 1997; Dorn & Papalewis, 1997; Unger, G., 1996; Lucas, C.J., 1994; Bowen and Rudenstein, 1992; Nerad & Cerny, 1991). Analyses contained in the NSU longitudinal studies for graduate programs, discussed previously, revealed that the university's doctoral program completion rates compare favorably with this "rule of thumb." NSU's master's program completion rate was shown to compare favorably with that of master's programs at the University of Florida.

The data below reflect a summary of national and state benchmarks discussed above regarding graduation rates, presented by degree level, gender, and race:

<b>National Benchmarks (six-year rate estimates)</b>	<b>Graduation Rate</b>
Undergraduate students	
All colleges and universities	45%
Private colleges and universities	72%
Graduate students (all colleges and universities)	50%

National Benchmarks (five-year rate estimates)	Graduation Rate
Undergraduate and graduate students	
Public colleges and universities	43%
Private colleges and universities	56%
All colleges and universities	52%
State of Florida Benchmarks (six-year rate estimates)	
Undergraduates in public institutions	61%
Undergraduates in private institutions	47%

## Impetus for Examining Graduation Rate By Major

In accordance with the stipulations contained in the *Criteria for Accreditation* of the Southern Association of Colleges and Schools (SACS), NSU has conducted a periodic assessment of institutional effectiveness since the early 1980's (1998). The University's formal Institutional Effectiveness process was focused at the program level at the recommendation of the SACS Commission on Colleges (COC) for the 1998-99 academic year; during all prior academic cycles, commencing in the early 1980's, the process had focused on the academic center/college/school level. The compilation of data for reaffirmation purposes and the interest of administration in on-going examination of graduation and persistence rates together formed the impetus for conducting this study.

## DEFINITION OF POPULATION

The population examined for this study comprises all students enrolled in extant majors as of Fall 1994 (N = 13,887); accordingly, students included in the study will have enrolled for the first time during any one of a number of terms over a period of several years, prior to and including the Fall 1994 term.<sup>1</sup> The academic majors extant as of Fall Term 1994 are presented by academic unit in Table 1, and by level (e.g., bachelor's, master's/specialist, and doctoral) in Table 2.

## METHODOLOGY

Data for this study were generated by two computerized student information databases, one maintained through the new university administrative system, Banner, and the other maintained through the older Student Information System. The study was designed to identify for each major program two sub-groups that partially comprise the overall population of enrollees in those majors

---

<sup>1</sup> Considerable attention was given to the appropriate enrollment threshold for inclusion of a major in the study. The decision was made to exclude extant majors as of Fall Term 1994, for which total enrollment was 10 or fewer students on the basis that the small enrollment size would likely render meaningless any conclusions drawn. The reader is cautioned, however, to assess carefully the conclusions reached regarding other majors that, though included, had relatively small enrollment sizes (e.g., fewer than 20). Majors excluded from the study include: the B.S. Computer Systems, the B.S. Legal Assistant Studies, the M.S. in Computing Technology in Education, and the Ph.D. in Oceanography.

as of the Fall 1994 term: students who had graduated as of August 31, 1999, and students who were still enrolled as of that date. Both the total number of students in each category and the percentages of total 1994 enrollment represented by those numbers were calculated. These numbers and percentages were then combined for each major program to generate statistics reflecting an overall rate of persistence toward graduation for the major. Program performance relative to these rates was rank ordered from highest to lowest performance. For added perspective, data and analysis also are presented in ranked order by rate for each academic unit and by degree level. These statistics were then compared, as applicable, with those generated by the earlier studies.

## ORGANIZATION OF THE DATA

Data generated by this study are presented in five sections, as follows:

- ▶ DETAILED DATA REGARDING STUDENT ENROLLMENT, GRADUATION RATES, CONTINUED ENROLLMENT, AND OVERALL PERSISTENCE TOWARD GRADUATION BY MAJOR: This section (Table 3) provides more detailed information regarding the status of each major, presenting majors in order based on the overall rate of persistence toward graduation as in the above section, but also providing details regarding the number of students enrolled, the number and percentage who had graduated as of Fall Term 1999, the number and percentage who were still enrolled as of Fall Term 1999, and the combined number and percentage of those students who had graduated or were still enrolled.
- ▶ DETAILED DATA REGARDING STUDENT ENROLLMENT, GRADUATION RATES, CONTINUED ENROLLMENT, AND OVERALL PERSISTENCE TOWARD GRADUATION BY DEGREE LEVEL : This section (Tables 4-7) provides more detailed information regarding the status of each major, presenting majors within each degree level in declining order based on the overall rate of persistence toward graduation, but also providing the same additional data as above.
- ▶ DETAILED DATA REGARDING STUDENT ENROLLMENT, GRADUATION RATES, CONTINUED ENROLLMENT, AND OVERALL PERSISTENCE TOWARD GRADUATION BY ACADEMIC UNIT: This section (Tables 8-17) provides more detailed information regarding the status of each major, presenting majors within each academic unit in declining order based on the overall rate of persistence toward graduation, but also providing the same additional data as above.
- ▶ COMPARATIVE RATES OF GRADUATION AND PERSISTENCE FOR THE FALL TERM 1993 COHORT AS OF FALL TERM 1998 AND THE FALL TERM 1994 COHORT AS OF FALL TERM 1999 FOR SELECTED ACADEMIC UNITS: This section (Table 18) presents comparative data regarding the two indicated cohorts obtained from prior studies. All 1993 data is derived from the four cross-sectional studies cited previously that were conducted in Spring 1993, while the 1994 data was generated by the current study. The data is presented for the four units offering courses at off-campus sites, as follows: the Center for Psychological Studies, the Farquhar Center for Undergraduate Studies, the Fischler Graduate School of Education and Human Services, and the School of Business and Entrepreneurship.

- ▶ **SUMMARY OF COMPARATIVE RATES OF PERSISTENCE TOWARD GRADUATION:** This section, (Tables 19-21) provides the total persistence rate, representing the combined percentage of Fall 1994 students who had graduated or were still enrolled as of Fall 1999. Data is presented in three tables, distinguished as follows: rates of persistence by major, rates of persistence by major within each degree level, and rates of persistence by major within each academic unit. For each set of data, majors are listed based on rate in declining order, e.g., from the highest persistence rate to the lowest.

## RESULTS AND ANALYSIS OF FINDINGS

Included in this study were 13,887 students enrolled in 56 majors as of Fall Term 1994. Of that group, 9,127 (66%) had graduated by Fall Term 1999. An additional 8% were still enrolled. Together, these figures represent an overall rate of persistence toward graduation of 74%.

### **Student Enrollment, Graduation Rates, Continued Enrollment, and Overall Persistence Toward Graduation By Major**

As reflected in Table 3, when all 56 majors included in the study were compared, rates of overall persistence toward graduation range from 32% to 100%, a notable spread of 68 percentage points. A total of 22 (39%) out of the 56 majors had an overall rate of persistence toward graduation of 80% or above, while only 6 (11%) had an overall persistence rate below 50%.

The majors reflecting the highest rates of persistence toward graduation (i.e., those with rates of 90% or higher), when examined in the aggregate for all enrolled students, all are majors that prepare students for careers in the professions (although the set does not include all such majors). These programs, in which prospective practitioners typically must pass licensure or certificate examinations, include the following: Clinical Psychology, Law, Occupational Therapy, Optometry, Osteopathic Medicine, Physical Therapy, Physician Assistant, and Speech-Language Pathology. Interestingly, this set includes major programs at each academic level: bachelor's, master's, doctoral, and first-professional. This is not an unexpected finding. Students pursuing majors in the professions may perhaps be expected to demonstrate a more rigorous persistence rate due to such factors as cost and long-range commitment, among others. A converse, and not surprising finding, was that at the bachelor's level, nonprofessional degree programs are more heavily represented in the lower half of percentage rates.

With regard to graduation rate alone, only four of the 56 majors had a graduation rate of 90 or above, as reflected in Table 3; however, an additional nine majors had a graduation rate between 80 and 90%. At the lowest end, 21 of the 56 majors had a persistence rate at or below 50%, while the rate was below 20% for only two of the majors, the B.S. Ocean Studies (19%) and the Ph.D. Dispute Resolution, for which no students had graduated after five years.

It should be noted that there is a considerable range in the student enrollment for the 56 majors. The highest enrollments are in the M.S./Ed.S. Education (1,985), Master of Business Administration

(1,250), and B.S. Professional Management (1,111) programs. The lowest enrollments were those for the M.S. Coastal Zone Management (18), B.S. General Studies (14), and Ph.D. Dispute Resolution (12) programs. Although, as noted previously, majors with an enrollment of 10 or fewer were excluded from the study, the wide dispersion of enrollments for the included majors warrants an additional cautionary note to the reviewer in drawing inferences from comparative rates.

## **Student Enrollment, Graduation Rates, Continued Enrollment, and Overall Persistence Toward Graduation By Degree Level**

Tables 4-7 present rates of persistence for the majors by degree level, as follows: bachelor's, master's, and doctoral. Table 4, which presents data for majors at the bachelor's level, reflects a range of overall rates of persistence toward graduation of 61 percentage points, with a low of 32% for the B.S. Ocean Studies major and a high of 93% for the B.S. Physician Assistant major, among the group of professional degree programs noted above. The B.S. Physician Assistant rate is 19 percentage points above the next highest rate of 74% for the Psychology major. The graduation rate for 7 of the 18 bachelor's-level majors is below 50%, while the overall rate of persistence toward graduation is below 50% for only 5 of the majors, the latter set including: B.S. Life Sciences, B.S. Applied Professional Studies, B.S. Secondary Education, B.S. Computer Science, and B.S. Ocean Studies. Of the 3,519 students enrolled as of Fall Term 1994 in a bachelor's-level program, 1,976 (56%) had graduated and 236 (7%) were still enrolled five years later, reflecting an overall rate of persistence toward graduation of 63%.

Table 5 presents the rate of graduation and overall rate of persistence for the 21 master's-level majors. The range of overall rates of persistence toward graduation is 56 percentage points (a lower point spread than that for the bachelor's programs), from a low of 44% for the M.S. Marine Biology (the only major for which the rate is below 50%) to a high of 100% for the M.P.T. Physical Therapy. The three majors reflecting the highest rates of persistence (90% or higher) are all professional degree programs. Of the 21 majors, the rate of graduation is below 50% for only two of the majors (the M.S./Ed.S. Education and the M.S. Marine Biology). The graduation rates for the master's-level programs range from a high of 100% for the M.P.T. Physical Therapy to a low of 26% for the M.S. Marine Biology. Of the 5,214 students enrolled as of Fall Term 1994 in a master's-level program, 3,573 (69%) had graduated and 242 (5%) were still enrolled five years later, reflecting an overall rate of persistence toward graduation of 73%. All three of these figures are above those reflected for the bachelor's-level programs, as indicated above.

Table 6 presents similar information for the doctoral-level majors, of which there are 17. The range of rates of overall persistence is only 39%, a significantly lower point spread than that for the bachelor's or the master's programs, reported above as 61 and 56 percentage points, respectively. The six majors with the highest rates of overall persistence are all professional degree programs, with O.D. Optometry reflecting the highest rate at 96%, followed by D.O. Osteopathic Medicine, J.D. Law, Ph.D./Psy.D. Clinical Psychology, Ph.D. Family Therapy, and PharmD. Pharmacy. For none of the majors was the overall rate of persistence less than 50%. The major with the lowest reported persistence rate was Ph.D. Information Systems and Science, however, the rate was not a notable outlier when examined within the context of the entire group. The graduation rate, however, was

below 50% for 10 of the majors, reflecting the expected extended matriculation periods for doctoral-level programs. The lowest rate was that for the Ph.D. Dispute Resolution, in which none of the 12 students enrolled as of Fall Term 1994 had graduated after five years.

Among the lowest graduation rates, in addition to the zero rate referenced above for the Ph.D. Dispute Resolution, were those for Ph.D. Computer Information Systems (29%), Doctor of International Business Administration (27%), Doctor of Business Administration (28%), and Ph.D. Information Systems and Science (27%). Of the 5,154 students enrolled in a doctoral program as of Fall Term 1994, 3,578 (69%) had graduated after five years. An additional 687 students (13%) were still enrolled, for an overall rate of persistence of 83%, well above the rates of 73% and 63% reported, as above, respectively, for the master's and bachelor's-level majors.

Table 7 summarizes data from Tables 4-6, reflecting enrollments, graduation rates, continued enrollment, and overall persistence toward graduation by degree level.

### **Student Enrollment, Graduation Rates, Continued Enrollment, and Overall Persistence Toward Graduation By Academic Unit**

Tables 8-16 present rates of persistence for each major by academic unit. Table 17 summarizes data, presenting overall graduation rates, rates of continued enrollment, and overall rates of persistence toward graduation for each academic unit as a whole.

Table 8 presents data for the two majors and 1,165 enrollees included in the study for the Center for Psychological Studies. As reflected, the rate of overall persistence toward graduation for the Ph.D./Psy.D. Clinical Psychology is high based on the national rate estimate of 50%. The rate for the M.S. Mental Health Counseling, at 84%, is also high but this was based on cross-sectional, not longitudinal data.

Table 9 presents data for the Farquhar Center for Undergraduate Studies, for which 17 majors and 3,458 enrollees were included in the study. The majors included in this table, with the exception of the B.S. Physician Assistant (the latter major having been offered through the College of Allied Health of the Health Professions Division), are the same as those included in Table 4 that examines data for all majors offered at the bachelor's degree level. With the exclusion of the B.S. Physician Assistant from the set, the data are considerably different. The high graduation and overall persistence toward graduation rates for the B.S. Physician Assistant significantly expanded the range of rates. The range of graduation rates solely for the Farquhar Center is 51 percentage points (the range including the B.S. Physician Assistant was 74 percentage points), from a low of 19% for the B.S. Ocean Studies major to a high of 70% for the B.S. Professional Management. A similar picture emerges for the overall rate of persistence toward graduation, for which the range for the Farquhar Center is 42 percentage points, from a high of 74% to a low of 32% for the B.S. Ocean Studies. The range including the B.S. Physician Assistant was 61 percentage points.

Table 10 presents persistence rates for the Fischler Graduate School of Education and Human Services (in 1994, called the Fischler Center for the Advancement of Education). Included in the

study were 7 majors and 4,145 enrollees. While none of the overall rates of persistence toward graduation are below 50% (the lowest is 57% for the M.S./Ed.S. Education), and for only two of the majors is the rate of graduation below 50% (49% for both the Doctor of Education and the M.S./Ed.S. Education), the rates of graduation and overall persistence toward graduation for the other majors are relatively high, all above 70%. The rates are highest for the two majors which prepare students for eventual certification/licensure, the M.S. Speech-Language Pathology and the M.S. School Guidance and Counseling.

Table 11 presents data for the Health Professions Division. Six majors and 1,286 enrollees were included in the study for that unit. Not unexpectedly, given the nature of the programs offered, both the rates of graduation and the overall rates of persistence toward graduation are quite high compared with national estimates for work at the non-professional graduate level.

Table 12 presents data for the Oceanographic Center. Data for the two majors included in this study for that center reflect quite different rates of graduation and overall persistence toward graduation. While the rates of graduation are modest to low, at 44% and 26% for the M.S. Coastal Zone Management and the M.S. Marine Biology, respectively, the rates of overall persistence toward graduation are significantly different at 72% for the M.S. Coastal Zone Management and 44% for the M.S. Marine Biology. It should be noted that the total number of enrollees in the two programs, at 68, is relatively low compared with other centers, which may impact conclusions to be drawn from data regarding persistence.

Table 13 presents data for the School of Business and Entrepreneurship, encompassing 10 majors and 2,216 enrollees. The range of rates of overall persistence toward graduation is only 24%, reflecting consistency across majors. For three of the majors the graduation rate is moderate to low (42%, 28%, and 27%, respectively, for the Doctor of Public Administration, the Doctor of Business Administration, and the Doctor of International Business Administration), however, these represent doctoral programs for which time to completion is expected to be extended. For none of the majors is the overall rate of persistence toward graduation below 50%, with the lowest at 65% for the Doctor of Business Administration.

Table 14 presents data for the School of Computer and Information Sciences, for which 7 majors and 420 enrollees were included in the study. While for four of the majors the graduation rate is moderate to well below 50%, all of the overall rates of persistence toward graduation are above 50%, the lowest at 57% for the Ph.D. Information Systems and Science. The range from highest to lowest overall rate of persistence to graduation is only 30 percentage points.

Table 15 presents data for the School of Social and Systemic Studies, for which 4 majors and 195 enrollees were included in the study. While the graduation rate for the two doctoral majors is low, the rate of overall persistence toward graduation is consistently high across all four majors, with a range of only 4 percentage points.

Table 16 addresses the rate of graduation for the sole major of the Shepard Broad Law Center, the J.D. Law, for which there were 934 enrollees. As reflected, both the graduation rate and the overall rate of persistence toward graduation are high, at 89% and 90%, respectively.

Table 17 presents a summary of the data contained in Tables 8-16, providing composite, cross-major figures for all enrollees, by academic unit. The range of graduation rates across centers is 61 percentage points, from a low of 31% for the Oceanographic Center to a high of 92% for the Health Professions Division. For none of the academic units is the overall rate of persistence toward graduation less than 50%.

### **Comparative Rates of Graduation and Persistence for the Fall Term 1993 Cohort as of Fall Term 1998 and the Fall Term 1994 Cohort as of Fall Term 1999 for Selected Academic Units**

Table 18 presents comparisons of graduation rates and overall rates of persistence for the Fall Term 1993 cohort as of Fall Term 1998 and the Fall Term 1994 cohort as of Fall Term 1999 for four academic units for which prior studies had been conducted: the Center for Psychological Studies, the Farquhar Center for Undergraduate Studies, the Fischler Graduate School of Education and Human Services, and the School of Business and Entrepreneurship. For all four units, the numbers of enrollees in both Fall Terms are relatively comparable. While there is an approximate 10 percentage point spread in the graduation rates for the two cohort groups in all the units except the Center for Psychological Studies (for which the spread is 3 percentage points), the differences in the overall rates of persistence toward graduation for the two cohorts are much less, with a maximum of 6 points for the Farquhar Center and 2 points or fewer for each of the other units. This comparison reflects a fair amount of consistency across the two academic cycles.

Tables 19-21 summarize the overall rates of persistence toward graduation by major, degree level, and academic unit that have been addressed above.

## **Summary of Findings**

The findings from this study reflect a wide range among the graduation and overall persistence rates of students enrolled in 56 majors as of Fall Term 1994. As reported, the graduation rates for the majors range from 32% to 100%. However, when examined in the aggregate, of the 13,887 students enrolled in those majors as of Fall Term 1994, 66% had graduated by Fall Term 1999 and an additional 8% were still enrolled, reflecting an aggregate overall rate of persistence toward graduation of 74%.

NSU majors reflecting the highest overall rates of persistence toward graduation (90% or higher) all are majors that prepare students for careers in the professions. For 21 of the 56 majors, the overall rate of persistence is below 50%, with only one major having graduated no students after five years. As was noted above, a significant factor in generating wide differences in rates is the considerable range in the student enrollment for the 56 majors, which ranged from 12 to 1,985. Majors for which there were 10 or fewer enrollees as of Fall Term 1994 were excluded from the study; however, as pointed out, even low-end enrollments of 11-20 may be responsible for skewing the rate data, and this should be taken into account in drawing conclusions regarding comparative rates.

When examined by degree level, not unexpectedly, the doctoral-level majors evidenced the lowest range in rates of overall persistence (39 percentage points), compared with those for the bachelor's and master's levels (61 and 56 percentage points, respectively), as well as the highest overall rate of persistence (83%), compared with those for the bachelor's (63%) and master's (73%) levels. For none of the doctoral majors was the overall rate of persistence less than 50%; however, the graduation rate is below 50% for 10 of those majors, reflecting, as indicated, predictable extended matriculation periods for doctoral students. For the 18 bachelor's level majors, the graduation rate is below 50% for 7 majors, while the overall rate of persistence toward graduation is less than 50% for only 5 of the majors. At the master's level, the graduation rate is below 50% for only two of the 21 majors.

Graduation rates and overall rates of persistence toward graduation also were examined by academic unit. The range of graduation rates is 61 percentage points. The overall rate of persistence toward graduation is above 50% for all of the units.

The comparison of the 1993 and 1994 fall term cohorts revealed relative consistency across those two academic cycles. The percentage point spread is 10 or fewer for the two cohort groups for all of the academic units.

## **Implications for the Future and for Further Study**

Given that the most recent study by Atherton (1999) revealed an improved rate of persistence for the 1993 cohort over that revealed for the 1989-92 cohorts, and that the university has expended considerable effort in improving financial aid counseling, instituting various curricular improvements, and in other related initiatives designed to positively impact the level of student persistence, a continuing increase in the rate is anticipated. Specifically, it is hoped that by the time the first Student-Right-To-Know reports are due in 2002, NSU will have achieved a 46% graduation rate on a cohort basis, and 50% over the next five years.

While highlighting notable differences in rates of graduation and persistence toward graduation among the majors examined, this study provided only limited exploration of possible causative or explanatory factors. This is an area that merits further study. In particular, it may be useful to examine differences among the academic units, as well as those among individual academic programs within units, in the processes and procedures applied to tracking students through their programs and interventions extended to students at critical junctures along the way (such as, but not limited to, academic advising, assistance with financial aid, opportunities to enrich their educational experience through interactions with faculty outside the classroom, and assistance early on with long-range career planning). In addition, it may be useful to investigate national and discipline-specific trends, including, but not limited to, the prospective obsolescence or significant modification of certain disciplines which may impact student decisions regarding persistence and, therefore, graduation and attrition rates. Finally, as is always the case, many students who are not reflected in the graduated and still enrolled category may have transferred to other universities. This study has not determined the extent of leavers who are continuing elsewhere.

**Extant Majors as of Fall Term 1994**  
**Contained in the NSU Student System\***

\*Majors with fewer than 10 students deleted

**TABLE 1**  
**Extant Majors By Academic Unit With Enrollments in Fall Term 1994**

Center for Psychological Studies  
M.S. Mental Health Counseling  
Ph.D./Psy.D. Clinical Psychology

Farquhar Center for Undergraduate Studies

B.A. Liberal Arts  
B.S. Accounting  
B.S. Administrative Studies  
B.S. Applied Professional Studies  
B.S. Business Administration  
B.S. Computer Information Systems  
B.S. Computer Science  
B.S. Computer Systems  
B.S. Elementary Education  
B.S. Exceptional Education  
B.S. General Studies  
B.S. Hospitality Management  
B.S. Legal Assistant Studies  
B.S. Legal Studies (prelaw)  
B.S. Life Sciences (premedical)  
B.S. Ocean Studies  
B.S. Professional Management  
B.S. Psychology  
B.S. Secondary Education

Fischler Graduate School of Education and Human Services

Doctor of Education  
Ed.D. Child and Youth Studies  
Ed.D. Educational Leadership  
M.S. Education  
M.S. School Guidance and Counseling  
Master of Science (multiple human support & care, & administration specializations)  
M.S. Speech-Language Pathology

Health Professions Division

B.S. Physician Assistant  
D.O. Osteopathic Medicine  
M.O.T. Occupational Therapy  
M.P.T. Physical Therapy  
PharmD. Pharmacy  
O.D. Optometry

Oceanographic Center

M.S. Coastal Zone Management  
M.S. Marine Biology  
Ph.D. Oceanography

School of Business and Entrepreneurship

Doctor of Business Administration  
Doctor of International Business Administration  
Doctor of Public Administration  
Master of Accounting  
Master of Business Administration  
Master of International Business Administration  
Master of Public Administration  
M.S. Health Services Administration  
M.S. Human Resource Management  
M.S. Human Services

School of Computer and Information Sciences

M.S. Computer Information Systems  
M.S. Computer Science  
M.S. Computing Technology in Education  
M.S. Management Information Systems  
Ph.D. Computer Information Systems  
Ph.D. Computer Science  
Ph.D./Ed.D. Computing Technology in Education  
Ph.D. Information Systems and Science

School of Social and Systemic Studies

M.S. Dispute Resolution  
M.S. Family Therapy  
Ph.D. Dispute Resolution  
Ph.D. Family Therapy

Shepard Broad Law Center

J.D. Law

**TABLE 2**  
**Extant Majors By Level as of Fall Term 1994**

Bachelor's Degree Programs

B.A. Liberal Arts  
 B.S. Accounting  
 B.S. Administrative Studies  
 B.S. Applied Professional Studies  
 B.S. Business Administration  
 B.S. Computer Information Systems  
 B.S. Computer Science  
 B.S. Computer Systems  
 B.S. Elementary Education  
 B.S. Exceptional Education  
 B.S. General Studies  
 B.S. Hospitality Management  
 B.S. Legal Assistant Studies  
 B.S. Legal Studies (prelaw)  
 B.S. Life Sciences (premedical)  
 B.S. Ocean Studies  
 B.S. Physician Assistant  
 B.S. Professional Management  
 B.S. Psychology  
 B.S. Secondary Education

M.S. Speech-Language Pathology

Doctoral Degree Programs

Doctor of Business Administration  
 Doctor of Education  
 Doctor of International Business Administration  
 Doctor of Public Administration  
 D.O. Osteopathic Medicine  
 Ed.D. Child and Youth Studies  
 Ed.D. Educational Leadership  
 J.D. Law  
 O.D. Optometry  
 PharmD. Pharmacy  
 Ph.D./Psy.D. Clinical Psychology  
 Ph.D. Computer Information Systems  
 Ph.D. Computer Science  
 Ph.D./Ed.D. Computing Technology in  
 Education  
 Ph.D. Dispute Resolution  
 Ph.D. Family Therapy  
 Ph.D. Information Systems and Science  
 Ph.D. Oceanography

Master's/Specialist Degree Programs

Master of Accounting  
 Master of Business Administration  
 Master of International Business Administration  
 Master of Public Administration  
 Master of Science (multiple human support &  
 care, & administration specializations)  
 M.O.T. Occupational Therapy  
 M.P.T. Physical Therapy  
 M.S. Coastal Zone Management  
 M.S. Computer Information Systems  
 M.S. Computer Science  
 M.S. Computing Technology in Education  
 M.S. Dispute Resolution  
 M.S./Ed.S. Education  
 M.S. Family Therapy  
 M.S. Health Services Administration  
 M.S. Human Resource Management  
 M.S. Human Services  
 M.S. Management Information Systems  
 M.S. Marine Biology  
 M.S. Mental Health Counseling  
  
 M.S. School Guidance and Counseling

**Detailed Data Regarding Student Enrollment,  
Graduation Rates, Continued Enrollment,  
and Overall Persistence Toward Graduation**

**By**

**Major**

**TABLE 3**  
**Rate of Persistence Toward Graduation by Major**  
**For All Majors Extant as of Fall Term 1994**

Major Program	Number Enrolled	No. Graduated as of 8/31/99	% Graduated as of 8/31/99	No. Still Enrolled During 1998-99 Academic Year	% Still Enrolled	No. Graduated and Still Enrolled	% Graduated and Still Enrolled
M.P.T. Physical Therapy	60	60	100%	0	0%	60	100%
O.D. Optometry	328	312	95%	2	1%	314	96%
D.O. Osteopathic Medicine	530	499	94%	7	1%	506	95%
B.S. Physician Assistant	61	57	93%	0	0%	57	93%
M.O.T. Occupational Therapy	45	40	89%	1	2%	41	91%
M.S. Speech-Language Pathology	228	195	86%	12	5%	207	91%
J.D. Law	934	832	89%	4	0%	836	90%
Ph.D./Psy.D. Clinical Psychology	419	274	65%	105	25%	379	90%
Master of International Business Administration	123	104	85%	5	4%	109	89%
M.S. School Guidance & Counseling	46	41	89%	0	0%	41	89%
M.S. Management Information Systems	55	45	82%	3	5%	48	87%
Master of Business Administration	1,250	1,052	84%	20	2%	1,072	86%
Ph.D. Family Therapy	48	19	40%	22	46%	41	85%
M.S. Dispute Resolution	49	40	82%	1	2%	41	84%
M.S. Mental Health Counseling	746	612	82%	17	2%	629	84%
PharmD. Pharmacy	262	213	81%	7	3%	220	84%
Ed.D. Educational Leadership	837	599	72%	98	12%	697	83%
Ph.D. Dispute Resolution	12	0	0%	10	83%	10	83%

Major Program	Number Enrolled	No. Graduated as of 8/31/99	% Graduated as of 8/31/99	No. Still Enrolled During 1998-99 Academic Year	% Still Enrolled	No. Graduated and Still Enrolled	% Graduated and Still Enrolled
M.S. Computer Information Systems	78	63	81%	0	0%	63	81%
M.S. Family Therapy	86	67	78%	3	3%	70	81%
M.S. Human Services	21	17	81%	0	0%	17	81%
Ed.D. Child and Youth Studies	318	258	81%	0	0%	258	81%
Ph.D. Computer Information Systems	21	6	29%	10	48%	16	76%
B.S. Psychology	231	152	66%	20	9%	172	74%
Doctor of Education	679	336	49%	157	23%	493	73%
B.S. Professional Management	1,111	775	70%	29	3%	804	72%
M.S. Coastal Zone Management	18	8	44%	5	28%	13	72%
Master of Science (multiple human support & care, & administration specializations)	52	37	71%	0	0%	37	71%
M.S. Health Services Administration	77	53	69%	2	3%	55	71%
Doctor of International Business Administration	83	22	27%	36	43%	58	70%
M.S. Human Resource Management	71	48	68%	1	1%	49	69%
Doctor of Public Administration	45	19	42%	12	27%	31	69%
Master of Accounting	124	80	65%	4	3%	84	68%
Master of Public Administration	28	19	68%	0	0%	19	68%
Ph.D./Ed.D. Computing Technology in Education	63	27	43%	16	25%	43	68%
B.S. Legal Studies (prelaw)	105	57	54%	11	10%	68	65%

Major Program	Number Enrolled	No. Graduated as of 8/31/99	% Graduated as of 8/31/99	No. Still Enrolled During 1998-99 Academic Year	% Still Enrolled	No. Graduated and Still Enrolled	% Graduated and Still Enrolled
Doctor of Business Administration	394	110	28%	148	38%	258	65%
Ph.D. Computer Science	28	10	36%	8	29%	18	64%
B.A. Liberal Arts	26	16	62%	0	0%	16	62%
B.S. Elementary Education	661	362	55%	42	6%	404	61%
B.S. Business Administration	334	172	51%	28	8%	200	60%
M.S. Computer Science	22	12	55%	1	5%	13	59%
B.S. Accounting	99	51	52%	6	6%	57	58%
B.S. Administrative Studies	140	67	48%	13	9%	80	57%
B.S. General Studies	14	8	57%	0	0%	8	57%
M.S./Ed.S. Education	1,985	967	49%	158	8%	1,125	57%
Ph.D. Information Systems and Science	153	42	27%	45	29%	87	57%
B.S. Hospitality Management	144	72	50%	3	2%	75	52%
B.S. Computer Information Systems	67	27	40%	7	10%	34	51%
B.S. Exceptional Education	195	70	36%	29	15%	99	51%
B.S. Life Sciences (premedical)	91	30	33%	14	15%	44	48%
M.S. Marine Biology	50	13	26%	9	18%	22	44%
B.S. Applied Professional Studies	53	18	34%	5	9%	23	43%
B.S. Secondary Education	82	19	23%	15	18%	34	41%
B.S. Computer Science	52	13	25%	7	13%	20	38%
B.S. Ocean Studies	53	10	19%	7	13%	17	32%
<b>TOTALS</b>	<b>13,887</b>	<b>9,127</b>	<b>66%</b>	<b>1,165</b>	<b>8%</b>	<b>10,292</b>	<b>74%</b>

**Detailed Data Regarding Student Enrollment,  
Graduation Rates, Continued Enrollment,  
and Overall Persistence Toward Graduation**

**By**

**Degree Level**

**TABLE 4**  
**Rate of Persistence Toward Graduation For All Bachelor's Degree Level Majors Extant as of Fall Term 1994**

Major Program	Number Enrolled	No. Graduated as of 8/31/99	% Graduated as of 8/31/99	No. Still Enrolled During 1998-99 Academic Year	% Still Enrolled	No. Graduated and Still Enrolled	% Graduated and Still Enrolled
B.S. Physician Assistant	61	57	93%	0	0%	57	93%
B.S. Psychology	231	152	66%	20	9%	172	74%
B.S. Professional Management	1,111	775	70%	29	3%	804	72%
B.S. Legal Studies (prelaw)	105	57	54%	11	10%	68	65%
B.A. Liberal Arts	26	16	62%	0	0%	16	62%
B.S. Elementary Education	661	362	55%	42	6%	404	61%
B.S. Business Administration	334	172	51%	28	8%	200	60%
B.S. Accounting	99	51	52%	6	6%	57	58%
B.S. Administrative Studies	140	67	48%	13	9%	80	57%
B.S. General Studies	14	8	57%	0	0%	8	57%
B.S. Hospitality Management	144	72	50%	3	2%	75	52%
B.S. Computer Information Systems	67	27	40%	7	10%	34	51%
B.S. Exceptional Education	195	70	36%	29	15%	99	51%
B.S. Life Sciences (premedical)	91	30	33%	14	15%	44	48%
B.S. Applied Professional Studies	53	18	34%	5	9%	23	43%
B.S. Secondary Education	82	19	23%	15	18%	34	41%
B.S. Computer Science	52	13	25%	7	13%	20	38%
B.S. Ocean Studies	53	10	19%	7	13%	17	32%
<b>TOTALS</b>	<b>3,519</b>	<b>1,976</b>	<b>56%</b>	<b>236</b>	<b>7%</b>	<b>2,212</b>	<b>63%</b>

**TABLE 5**  
**Rate of Persistence Toward Graduation For All Master's**  
**Degree Level Majors Extant as of Fall Term 1994**

Major Program	Number Enrolled	No. Graduated as of 8/31/99	% Graduated as of 8/31/99	No. Still Enrolled During 1998-99 Academic Year	% Still Enrolled	No. Graduated and Still Enrolled	% Graduated and Still Enrolled
M.P.T. Physical Therapy	60	60	100%	0	0%	60	100%
M.O.T. Occupational Therapy	45	40	89%	1	2%	41	91%
M.S. Speech-Language Pathology	228	195	86%	12	5%	207	91%
Master of International Business Administration	123	104	85%	5	4%	109	89%
M.S. School Guidance & Counseling	46	41	89%	0	0%	41	89%
M.S. Management Information Systems	55	45	82%	3	5%	48	87%
Master of Business Administration	1,250	1,052	84%	20	2%	1,072	86%
M.S. Dispute Resolution	49	40	82%	1	2%	41	84%
M.S. Mental Health Counseling	746	612	82%	17	2%	629	84%
M.S. Computer Information Systems	78	63	81%	0	0%	63	81%
M.S. Family Therapy	86	67	78%	3	3%	70	81%
M.S. Human Services	21	17	81%	0	0%	17	81%
M.S. Coastal Zone Management	18	8	44%	5	28%	13	72%
Master of Science (multiple human support & care, & administration specializations)	52	37	71%	0	0%	37	71%
M.S. Health Services Administration	77	53	69%	2	3%	55	71%
M.S. Human Resource Management	71	48	68%	1	1%	49	69%
Master of Accounting	124	80	65%	4	3%	84	68%



Major Program	Number Enrolled	No. Graduated as of 8/31/99	% Graduated as of 8/31/99	No. Still Enrolled During 1998-99 Academic Year	% Still Enrolled	No. Graduated and Still Enrolled	% Graduated and Still Enrolled
Master of Public Administration	28	19	68%	0	0%	19	68%
M.S. Computer Science	22	12	55%	1	5%	13	59%
M.S./Ed.S. Education	1,985	967	49%	158	8%	1,125	57%
M.S. Marine Biology	50	13	26%	9	18%	22	44%
<b>TOTALS</b>	<b>5,214</b>	<b>3,573</b>	<b>69%</b>	<b>242</b>	<b>5%</b>	<b>3,815</b>	<b>73%</b>

TABLE 6  
Rate of Persistence Toward Graduation For All Doctoral  
Degree Level Majors Extant as of Fall Term 1994

Major Program	Number Enrolled	No. Graduated as of 8/31/99	% Graduated as of 8/31/99	No. Still Enrolled During 1998-99 Academic Year	% Still Enrolled	No. Graduated and Still Enrolled	% Graduated and Still Enrolled
O.D. Optometry	328	312	95%	2	1%	314	96%
D.O. Osteopathic Medicine	530	499	94%	7	1%	506	95%
J.D. Law	934	832	89%	4	0%	836	90%
Ph.D./Psy.D. Clinical Psychology	419	274	65%	105	25%	379	90%
Ph.D. Family Therapy	48	19	40%	22	46%	41	85%
PharmD. Pharmacy	262	213	81%	7	3%	220	84%
Ed.D. Educational Leadership	837	599	72%	98	12%	697	83%
Ph.D. Dispute Resolution	12	0	0%	10	83%	10	83%
Ed.D. Child and Youth Studies	318	258	81%	0	0%	258	81%
Ph.D. Computer Information Systems	21	6	29%	10	48%	16	76%
Doctor of Education	679	336	49%	157	23%	493	73%
Doctor of International Business Administration	83	22	27%	36	43%	58	70%
Doctor of Public Administration	45	19	42%	12	27%	31	69%
Ph.D./Ed.D. Computing Technology in Education	63	27	43%	16	25%	43	68%
Doctor of Business Administration	394	110	28%	148	38%	258	65%
Ph.D. Computer Science	28	10	36%	8	29%	18	64%
Ph.D. Information Systems and Science	153	42	27%	45	29%	87	57%
<b>TOTALS</b>	<b>5,154</b>	<b>3,578</b>	<b>69%</b>	<b>687</b>	<b>13%</b>	<b>4,265</b>	<b>83%</b>



**TABLE 7**  
**Summary of Rates of Persistence Toward Graduation by Level**  
**For Fall Term 1994 Cohort as of Fall 1999**

Level	Number Enrolled	Number Graduated	Percent Graduated	Number Still Enrolled	Percent Still Enrolled	Number Graduated and Still Enrolled	Percent Graduated and Still Enrolled
Bachelor's	3,519	1,976	56%	236	7%	2,212	63%
Master's	5,214	3,573	69%	242	5%	3,815	73%
Doctoral	5,154	3,578	69%	687	13%	4,265	83%
<b>TOTALS</b>	<b>13,887</b>	<b>9,127</b>	<b>66%</b>	<b>1,165</b>	<b>8%</b>	<b>10,292</b>	<b>74%</b>

**Detailed Data Regarding Student Enrollment,  
Graduation Rates, Continued Enrollment,  
and Overall Persistence Toward Graduation**

**By**

**Academic Unit**

TABLE 8

Rate of Persistence Toward Graduation for the Center for Psychological Studies  
Majors Extant as of Fall Term 1994

Major Program	Number Enrolled	No. Graduated as of 8/31/99	% Graduated as of 8/31/99	No. Still Enrolled During 1998-99 Academic Year	% Still Enrolled	No. Graduated and Still Enrolled	% Graduated and Still Enrolled
Ph.D./Psy.D. Clinical Psychology	419	274	65%	105	25%	379	90%
M.S. Mental Health Counseling	746	612	82%	17	2%	629	84%
<b>TOTALS</b>	<b>1,165</b>	<b>886</b>	<b>76%</b>	<b>122</b>	<b>10%</b>	<b>1,008</b>	<b>87%</b>

BEST COPY AVAILABLE

**TABLE 9**  
**Rate of Persistence Toward Graduation for the Farquhar Center for**  
**Undergraduate Studies Majors Extant as of Fall Term 1994**

Major Program	Number Enrolled	No. Graduated as of 8/31/99	% Graduated as of 8/31/99	No. Still Enrolled During 1998-99 Academic Year	% Still Enrolled	No. Graduated and Still Enrolled	% Graduated and Still Enrolled
B.S. Psychology	231	152	66%	20	9%	172	74%
B.S. Professional Management	1,111	775	70%	29	3%	804	72%
B.S. Legal Studies (prelaw)	105	57	54%	11	10%	68	65%
B.A. Liberal Arts	26	16	62%	0	0%	16	62%
B.S. Elementary Education	661	362	55%	42	6%	404	61%
B.S. Business Administration	334	172	51%	28	8%	200	60%
B.S. Accounting	99	51	52%	6	6%	57	58%
B.S. Administrative Studies	140	67	48%	13	9%	80	57%
B.S. General Studies	14	8	57%	0	0%	8	57%
B.S. Hospitality Management	144	72	50%	3	2%	75	52%
B.S. Computer Information Systems	67	27	40%	7	10%	34	51%
B.S. Exceptional Education	195	70	36%	29	15%	99	51%
B.S. Life Sciences (premedical)	91	30	33%	14	15%	44	48%
B.S. Applied Professional Studies	53	18	34%	5	9%	23	43%
B.S. Secondary Education	82	19	23%	15	18%	34	41%
B.S. Computer Science	52	13	25%	7	13%	20	38%
B.S. Ocean Studies	53	10	19%	7	13%	17	32%
<b>TOTAL</b>	<b>3,458</b>	<b>1,919</b>	<b>55%</b>	<b>236</b>	<b>7%</b>	<b>2,155</b>	<b>62%</b>

**TABLE 10**  
**Rate of Persistence Toward Graduation for the Fischler Graduate School of Education**  
**and Human Services Majors Extant as of Fall Term 1994**

Major Program	Number Enrolled	No. Graduated as of 8/31/99	% Graduated as of 8/31/99	No. Still Enrolled During 1998-99 Academic Year	% Still Enrolled	No. Graduated and Still Enrolled	% Graduated and Still Enrolled
M.S. Speech-Language Pathology	228	195	86%	12	5%	207	91%
M.S. School Guidance & Counseling	46	41	89%	0	0%	41	89%
Ed.D. Educational Leadership	837	599	72%	98	12%	697	83%
Ed.D. Child and Youth Studies	318	258	81%	0	0%	258	81%
Doctor of Education	679	336	49%	157	23%	493	73%
Master of Science (multiple human support & care, & administration specializations)	52	37	71%	0	0%	37	71%
M.S./Ed.S. Education	1,985	967	49%	158	8%	1,125	57%
<b>TOTAL</b>	<b>4,145</b>	<b>2,433</b>	<b>59%</b>	<b>425</b>	<b>10%</b>	<b>2,858</b>	<b>69%</b>

**TABLE 11**  
**Rate of Persistence Toward Graduation for the Health Professions Division**  
**Majors Extant as of Fall Term 1994**

Major Program	Number Enrolled	No. Graduated as of 8/31/99	% Graduated as of 8/31/99	No. Still Enrolled During 1998-99 Academic Year	% Still Enrolled	No. Graduated and Still Enrolled	% Graduated and Still Enrolled
M.P.T. Physical Therapy	60	60	100%	0	0%	60	100%
O.D. Optometry	328	312	95%	2	1%	314	96%
D.O. Osteopathic Medicine	530	499	94%	7	1%	506	95%
B.S. Physician Assistant	61	57	93%	0	0%	57	93%
M.O.T. Occupational Therapy	45	40	89%	1	2%	41	91%
PharmD. Pharmacy	262	213	81%	7	3%	220	84%
<b>TOTALS</b>	<b>1,286</b>	<b>1,181</b>	<b>92%</b>	<b>17</b>	<b>1%</b>	<b>1,198</b>	<b>93%</b>

**TABLE 12**  
**Rate of Persistence Toward Graduation for the Oceanographic Center**  
**Majors Extant as of Fall Term 1994**

Major Program	Number Enrolled	No. Graduated as of 8/31/99	% Graduated as of 8/31/99	No. Still Enrolled During 1998-99 Academic Year	% Still Enrolled	No. Graduated and Still Enrolled	% Graduated and Still Enrolled
M.S. Coastal Zone Management	18	8	44%	5	28%	13	72%
M.S. Marine Biology	50	13	26%	9	18%	22	44%
<b>TOTALS</b>	<b>68</b>	<b>21</b>	<b>31%</b>	<b>14</b>	<b>21%</b>	<b>35</b>	<b>51%</b>

**TABLE 13**  
**Rate of Persistence Toward Graduation for the School of Business and Entrepreneurship**  
**Majors Extant as of Fall Term 1994**

Major Program	Number Enrolled	No. Graduated as of 8/31/99	% Graduated as of 8/31/99	No. Still Enrolled During 1998-99 Academic Year	% Still Enrolled	No. Graduated and Still Enrolled	% Graduated and Still Enrolled
Master of International Business Administration	123	104	85%	5	4%	109	89%
Master of Business Administration	1,250	1,052	84%	20	2%	1,072	86%
M.S. Human Services	21	17	81%	0	0%	17	81%
M.S. Health Services Administration	77	53	69%	2	3%	55	71%
Doctor of International Business Administration	83	22	27%	36	43%	58	70%
Doctor of Public Administration	45	19	42%	12	27%	31	69%
M.S. Human Resource Management	71	48	68%	1	1%	49	69%
Master of Accounting	124	80	65%	4	3%	84	68%
Master of Public Administration	28	19	68%	0	0%	19	68%
Doctor of Business Administration	394	110	28%	148	38%	258	65%
<b>TOTALS</b>	<b>2,216</b>	<b>1,524</b>	<b>69%</b>	<b>228</b>	<b>10%</b>	<b>1,752</b>	<b>79%</b>

**TABLE 14**  
**Rate of Persistence Toward Graduation by the School of Computer and Information Sciences**  
**Majors Extant as of Fall Term 1994**

Major Program	Number Enrolled	No. Graduated as of 8/31/99	% Graduated as of 8/31/99	No. Still Enrolled During 1998-99 Academic Year	% Still Enrolled	No. Graduated and Still Enrolled	% Graduated and Still Enrolled
M.S. Management Information Systems	55	45	82%	3	5%	48	87%
M.S. Computer Information Systems	78	63	81%	0	0%	63	81%
Ph.D. Computer Information Systems	21	6	29%	10	48%	16	76%
Ph.D./Ed.D. Computing Technology in Education	63	27	43%	16	25%	43	68%
Ph.D. Computer Science	28	10	36%	8	29%	18	64%
M.S. Computer Science	22	12	55%	1	5%	13	59%
Ph.D. Information Systems and Science	153	42	27%	45	29%	87	57%
<b>TOTALS</b>	<b>420</b>	<b>205</b>	<b>49%</b>	<b>83</b>	<b>20%</b>	<b>288</b>	<b>69%</b>

BEST COPY AVAILABLE

**TABLE 15**  
**Rate of Persistence Toward Graduation for the School of Social and Systemic Studies**  
**Majors Extant as of Fall Term 1994**

Major Program	Number Enrolled	No. Graduated as of 8/31/99	% Graduated as of 8/31/99	No. Still Enrolled During 1998-99 Academic Year	% Still Enrolled	No. Graduated and Still Enrolled	% Graduated and Still Enrolled
Ph.D. Family Therapy	48	19	40%	22	46%	41	85%
M.S. Dispute Resolution	49	40	82%	1	2%	41	84%
Ph.D. Dispute Resolution	12	0	0%	10	83%	10	83%
M.S. Family Therapy	86	67	78%	3	3%	70	81%
<b>TOTALS</b>	<b>195</b>	<b>126</b>	<b>65%</b>	<b>36</b>	<b>19%</b>	<b>162</b>	<b>83%</b>

**TABLE 16**  
**Rate of Persistence Toward Graduation for the Shepard Broad Law Center**  
**Majors Extant as of Fall Term 1994**

Major Program	Number Enrolled	No. Graduated as of 8/31/99	% Graduated as of 8/31/99	No. Still Enrolled During 1998-99 Academic Year	% Still Enrolled	No. Graduated and Still Enrolled	% Graduated and Still Enrolled
J.D. Law	934	832	89%	4	0%	836	90%

**TABLE 17**  
**Summary of Rates of Persistence Toward Graduation by Academic Unit**  
**as of Fall Term 1994**

Academic Unit	Number Enrolled	Number Graduated as of 8/31/99	% Graduated as of 8/31/99	No. Still Enrolled During 1998-99 Academic Year	% Still Enrolled	Number Graduated and Still Enrolled	% Graduated and Still Enrolled
Health Professions Division	1,286	1,181	92%	17	1%	1,198	93%
Shepard Broad Law Center	934	832	89%	4	0%	836	90%
Center for Psychological Studies	1,165	886	76%	122	10%	1,008	87%
School of Social and Systemic Studies	195	126	65%	36	19%	162	83%
School of Business and Entrepreneurship	2,216	1,524	69%	228	10%	1,752	79%
Fischer Graduate School of Education and Human Services	4,145	2,433	59%	425	10%	2,858	69%
School of Computer and Information Sciences	420	205	49%	83	20%	288	69%
Farquhar Center for Undergraduate Studies	3,458	1,919	55%	236	7%	2,155	62%
Oceanographic Center	68	21	31%	14	21%	35	51%
<b>TOTAL</b>	<b>13,887</b>	<b>9,127</b>	<b>66%</b>	<b>1,165</b>	<b>8%</b>	<b>10,292</b>	<b>74%</b>

**Comparative Rates of Graduation and Persistence for the  
Fall Term 1993 Cohort as of Fall Term 1998  
and the  
Fall Term 1994 Cohort as of Fall Term 1999  
for Selected Academic Units**

**TABLE 18**  
**Comparative Rates of Graduation and Persistence for the Fall Term 1993 Cohort**  
**as of Fall Term 1998 and the Fall Term 1994 Cohort as of Fall Term 1999**

Center for Psychological Studies M.S. Mental Health Counseling Only (99-09)	Number Enrolled	No. Graduated as of 8/31 5 Years Later	% Graduated as of 8/31 5 Years Later	Number Still Enrolled 5 Years Later	% Still Enrolled	Number Graduated and Still Enrolled	% Graduated and Still Enrolled
Fall 1993 Cohort	700	593	85%	3	<1%	605	86%
Fall 1994 Cohort	746	612	82%	17	2%	629	84%

Farquhar Center for Undergraduate Studies (99-06)	Number Enrolled	No. Graduated as of 8/31 5 Years Later	% Graduated as of 8/31 5 Years Later	No. Still Enrolled 5 Years Later	% Still Enrolled	No. Graduated and Still Enrolled	% Graduated and Still Enrolled
Fall 1993 Cohort	3,300	2,181	66%	40	1%	2,243	68%
Fall 1994 Cohort	3,475	1,922	55%	238	7%	2,160	62%

Fischler Graduate School of Education and Human Services (99-07)	Number Enrolled	No. Graduated as of 8/31 5 Years Later	% Graduated as of 8/31 5 Years Later	No. Still Enrolled 5 Years Later	% Still Enrolled	No. Graduated and Still Enrolled	% Graduated and Still Enrolled
Fall 1993 Cohort	4,186	2,863	68%	1	<1%	2,865	68%
Fall 1994 Cohort	4,145	2,433	59%	425	10%	2,858	69%

School of Business and Entrepreneurship (99-08)	Number Enrolled	No. Graduated as of 8/31 5 Years Later	% Graduated as of 8/31 5 Years Later	No. Still Enrolled 5 Years Later	% Still Enrolled	No. Graduated and Still Enrolled	% Graduated and Still Enrolled
Fall 1993 Cohort	2,001	1,562	78%	23	1%	1,590	79%
Fall 1994 Cohort	2,216	1,524	69%	228	10%	1,752	79%

**Summary of Comparative Rates of Persistence Toward  
Graduation  
By Major for the Overall University,  
For Each Degree Level, and  
For Each Academic Unit**

**TABLE 19**  
**Rate of Persistence Toward Graduation by Major**  
**For All Majors Extant as of Fall Term 1994 with an Enrollment of at Least 10**

<b>Major Program</b>	<b>Rate of Persistence Toward Graduation (Graduated + Still Enrolled)</b>
M.P.T. Physical Therapy	100%
O.D. Optometry	96%
D.O. Osteopathic Medicine	95%
B.S. Physician Assistant	93%
M.O.T. Occupational Therapy	91%
M.S. Speech-Language Pathology	91%
J.D. Law	90%
Ph.D./Psy.D. Clinical Psychology	90%
Master of International Business Administration	89%
M.S. School Guidance and Counseling	89%
M.S. Management Information Systems	87%
Master of Business Administration	86%
Ph.D. Family Therapy	85%
M.S. Dispute Resolution	84%
M.S. Mental Health Counseling	84%
PharmD. Pharmacy	84%
Ed.D. Educational Leadership	83%
Ph.D. Dispute Resolution	83%
M.S. Computer Information Systems	81%
M.S. Family Therapy	81%
M.S. Human Services	81%
Ed.D. Child and Youth Studies	81%
Ph.D. Computer Information Systems	76%
B.S. Psychology	74%
Doctor of Education	73%
B.S. Professional Management	72%
M.S. Coastal Zone Management	72%
Master of Science (multiple human support & care, & administration specializations)	71%
M.S. Health Services Administration	71%
Doctor of International Business Administration	70%
M.S. Human Resource Management	69%
Doctor of Public Administration	69%
Master of Accounting	68%
Master of Public Administration	68%
Ph.D./Ed.D. Computing Technology in Education	68%
B.S. Legal Studies (prelaw)	65%
Doctor of Business Administration	65%

**Major Program****Rate of Persistence Toward Graduation  
(Graduated + Still Enrolled)**

Ph.D. Computer Science	64%
B.A. Liberal Arts	62%
B.S. Elementary Education	61%
B.S. Business Administration	60%
M.S. Computer Science	59%
B.S. Accounting	58%
B.S. Administrative Studies	57%
B.S. General Studies	57%
M.S./Ed.S. Education	57%
Ph.D. Information Systems and Science	57%
B.S. Hospitality Management	52%
B.S. Computer Information Systems	51%
B.S. Exceptional Education	51%
B.S. Life Sciences (premedical)	48%
M.S. Marine Biology	44%
B.S. Applied Professional Studies	43%
B.S. Secondary Education	41%
B.S. Computer Science	38%
B.S. Ocean Studies	32%

**TABLE 20**  
**Rates of Persistence Toward Graduation by Degree Level**  
**For All Majors Extant as of Fall Term 1994 with an Enrollment of at Least 10**

<b>Major Program</b>	<b>Rate of Persistence Toward Graduation (Graduated + Still Enrolled)</b>
<u>Bachelor's Degree Programs</u>	
B.S. Physician Assistant	93%
B.S. Psychology	74%
B.S. Professional Management	72%
B.S. Legal Studies (prelaw)	65%
B.A. Liberal Arts	62%
B.S. Elementary Education	61%
B.S. Business Administration	60%
B.S. Accounting	58%
B.S. Administrative Studies	57%
B.S. General Studies	57%
B.S. Hospitality Management	52%
B.S. Computer Information Systems	51%
B.S. Exceptional Education	51%
B.S. Life Sciences (premedical)	48%
B.S. Applied Professional Studies	43%
B.S. Secondary Education	41%
B.S. Computer Science	38%
B.S. Ocean Studies	32%
<u>Master's Degree Programs</u>	
M.P.T. Physical Therapy	100%
M.O.T. Occupational Therapy	91%
M.S. Speech-Language Pathology	91%
Master of International Business Administration	89%
M.S. School Guidance and Counseling	89%
M.S. Management Information Systems	87%
Master of Business Administration	86%
M.S. Dispute Resolution	84%
M.S. Mental Health Counseling	84%
M.S. Computer Information Systems	81%
M.S. Family Therapy	81%
M.S. Human Services	81%
M.S. Coastal Zone Management	72%
Master of Science (multiple human support & care, & administration specializations)	71%
M.S. Health Services Administration	71%

**Major Program****Rate of Persistence Toward Graduation  
(Graduated + Still Enrolled)**

M.S. Human Resource Management	69%
Master of Accounting	68%
Master of Public Administration	68%
M.S. Computer Science	59%
M.S./Ed.S. Education	57%
M.S. Marine Biology	44%

**Doctoral Degree Programs**

O.D. Optometry	96%
D.O. Osteopathic Medicine	95%
J.D. Law	90%
Ph.D./Psy.D. Clinical Psychology	90%
Ph.D. Family Therapy	85%
PharmD. Pharmacy	84%
Ed.D. Educational Leadership	83%
Ph.D. Dispute Resolution	83%
Ed.D. Child and Youth Studies	81%
Ph.D. Computer Information Systems	76%
Doctor of Education	73%
Doctor of International Business Administration	70%
Doctor of Public Administration	69%
Ph.D./Ed.D. Computing Technology in Education	68%
Doctor of Business Administration	65%
Ph.D. Computer Science	64%
Ph.D. Information Systems and Science	57%

**TABLE 21**  
**Rates of Persistence Toward Graduation by Academic Unit**  
**For All Majors Extant as of Fall Term 1994 with an Enrollment of at Least 10**

<b>Major Program</b>	<b>Rate of Persistence Toward Graduation (Graduated + Still Enrolled)</b>
<u>Center for Psychological Studies</u>	
Ph.D./Psy.D. Clinical Psychology	90%
M.S. Mental Health Counseling	84%
<u>Farquhar Center for Undergraduate Studies</u>	
B.S. Psychology	74%
B.S. Professional Management	72%
B.S. Legal Studies (prelaw)	65%
B.A. Liberal Arts	62%
B.S. Elementary Education	61%
B.S. Business Administration	60%
B.S. Accounting	58%
B.S. Administrative Studies	57%
B.S. General Studies	57%
B.S. Hospitality Management	52%
B.S. Computer Information Systems	51%
B.S. Exceptional Education	51%
B.S. Life Sciences (premedical)	48%
B.S. Applied Professional Studies	43%
B.S. Secondary Education	41%
B.S. Computer Science	38%
B.S. Ocean Studies	32%
<u>Fischler Graduate School of Education and Human Services</u>	
M.S. Speech-Language Pathology	91%
M.S. School Guidance and Counseling	89%
Ed.D. Educational Leadership	83%
Ed.D. Child and Youth Studies	81%
Doctor of Education	73%
Master of Science (multiple human support & care, & administration specializations)	71%
M.S./Ed.S. Education	57%
<u>Health Professions Division</u>	
M.P.T. Physical Therapy	100%
O.D. Optometry	96%
D.O. Osteopathic Medicine	95%

**Rate of Persistence Toward Graduation  
(Graduated + Still Enrolled)**

<b>Major Program</b>	
B.S. Physician Assistant	93%
M.O.T. Occupational Therapy	91%
PharmD. Pharmacy	84%
<u>Oceanographic Center</u>	
M.S. Coastal Zone Management	72%
M.S. Marine Biology	44%
<u>School of Business and Entrepreneurship</u>	
Master of International Business Administration	89%
Master of Business Administration	86%
M.S. Human Services	81%
M.S. Health Services Administration	71%
Doctor of International Business Administration	70%
Doctor of Public Administration	69%
M.S. Human Resource Management	69%
Master of Accounting	68%
Master of Public Administration	68%
Doctor of Business Administration	65%
<u>School of Computer and Information Sciences</u>	
M.S. Management Information Systems	87%
M.S. Computer Information Systems	81%
Ph.D. Computer Information Systems	76%
Ph.D./Ed.D. Computing Technology in Education	68%
Ph.D. Computer Science	64%
M.S. Computer Science	59%
Ph.D. Information Systems and Science	57%
<u>School of Social and Systemic Studies</u>	
Ph.D. Family Therapy	85%
M.S. Dispute Resolution	84%
Ph.D. Dispute Resolution	83%
M.S. Family Therapy	81%
<u>Shepard Broad Law Center</u>	
J.D. Law	90%

## References

American Association of State Colleges and Universities. (1997). Policies and practice: A focus on higher education retention. Washington, D.C.: Author.

Atherton, B. T. (1997a). Persistence and rates of graduation of students pursuing graduate degrees: Students entering the Fischler Center for the Advancement of Education and the School of Business and Entrepreneurship in Fall 1990. (Research Report 97-14). Ft. Lauderdale, FL: Nova Southeastern University, Office of Research and Planning.

Atherton, B. T. (1997b). Undergraduate persistence and rates of graduation: A cohort analysis of first-time in college freshman (Research Report 97-07). Ft. Lauderdale, FL: Nova Southeastern University, Office of Research and Planning.

Atherton, B. T. (1998). Persistence and rates of graduation of students pursuing graduate degrees II: Students entering graduate programs in Fall 1990 (Research Report 98-07). Ft. Lauderdale, FL: Nova Southeastern University, Office of Research and Planning.

Atherton, B. T. (1999). Persistence and rates of graduation of first time in college, full-time freshman (Research Report 99-15). Ft. Lauderdale, FL: Nova Southeastern University, Office of Research and Planning.

Berelson, B. (1960). Graduate education in the United States. New York: McGraw-Hill.

Consortium for Student Retention Data Exchange. (1998). 1997-98 CSRDE report: The retention and graduation rates in 232 colleges and universities. Norman, OK: Author.

Bowen, W. & Rudenstein, N. (1992). Pursuit of the Ph.D. Princeton, NJ: Princeton University Press, 1992.

Dorn, S. & Papalewis, R. (1997). Improving doctoral student retention. Paper presented at the annual meeting of the American Educational Research Association. (ERIC Document Reproduction Service No ED 406 894).

Kehrhahn, M., Sheckley, B., and Travers, N. (1999). Effectiveness and efficiency in graduate education. Paper presented at the annual meeting of the Association for Institutional Research (ERIC Document Reproduction Service No ED 433 759).

Losak, J. (1986). What constitutes student success in the community college? Community College Journal for Research and Planning, 5 (2), 1-15.

Lucas, C.J. (1994). American higher education: A history. New York, NY: St. Martin's Griffin.

MacFarland, T. W. (1999a). Matriculation status of fall term 1993 Center for Psychological Studies students by the beginning of fall term 1998. (Research Report 99-09). Ft. Lauderdale, FL: Nova Southeastern University, Office of Research and Planning.

MacFarland, T. W. (1999b). Matriculation status of fall term 1993 Farquhar Center for Undergraduate Studies students by the beginning of fall term 1998. (Research Report 99-06). Ft. Lauderdale, FL: Nova Southeastern University, Office of Research and Planning.

MacFarland, T. W. (1999c). Matriculation status of fall term 1993 Fischler Graduate School of Education and Human Services students by the beginning of fall term 1998. (Research Report 99-07). Ft. Lauderdale, FL: Nova Southeastern University, Office of Research and Planning.

MacFarland, T. W. (1999d). Matriculation status of fall term 1993 School of Business and Entrepreneurship students by the beginning of fall term 1998. (Research Report 99-08). Ft. Lauderdale, FL: Nova Southeastern University, Office of Research and Planning.

MacFarland, T. W. (1999e). Matriculation status of Nova Southeastern University's fall term 1993 cohort at the beginning of fall term 1998: Breakout analyses for campus-based students and distance education students. (Research Report 99-03). Ft. Lauderdale, FL: Nova Southeastern University, Office of Research and Planning.

National Research Council. (1996). The path to the Ph.D.: Measuring graduate attrition in the sciences and humanities. Washington, D.C.: Author.

Nerad, M. & Cerny, J. (1991). From facts to action: Expanding the educational role of the graduate division. [Special Edition]. CGS Communicator, 1-12.

Nerad, M., June, R., & Miller, D. (1997). Graduate education in the United States. New York: Garland Publishing Co.

Southern Association of Colleges and Schools. (1998). Criteria for accreditation. Decatur, GA: Author.

Tinto, V. (1992). Student attrition and retention. In B. Clark & G. Neave (Eds.), The Encyclopedia of Higher Education. New York: Pergamon Press.

Unger, H. (1996). Encyclopedia of American education. New York: Facts on File, Inc.

U.S. Department of Education. (1998). The condition of education. Washington, D.C.: Author.

U.S. Department of Education. (1993). Time to complete baccalaureate degree. [Special publication: Indicator of the Month - National Center for Education Statistics]. Washington, D.C.: Author.

Wheat, J. (1994). University students slow to graduate. (1994, June 16). Miami Herald.



U.S. Department of Education  
Office of Educational Research and Improvement (OERI)  
National Library of Education (NLE)  
Educational Resources Information Center (ERIC)



Reproduction Release  
(Specific Document)

I. DOCUMENT IDENTIFICATION:

Title: A Cross-Sectional Study of Graduation Rates by Major for the NSU 1994 Student Cohort	
Author(s): Dian R. Moorhouse, M.B.A.	
Corporate Source:	Publication Date: July 2000

II. REPRODUCTION RELEASE:

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, Resources in Education (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic media, and sold through the ERIC Document Reproduction Service (EDRS). Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce and disseminate the identified document, please CHECK ONE of the following three options and sign in the indicated space following.

The sample sticker shown below will be affixed to all Level 1 documents	The sample sticker shown below will be affixed to all Level 2A documents	The sample sticker shown below will be affixed to all Level 2B documents
<p>PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY</p> <p>_____</p> <p>TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)</p>	<p>PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE, AND IN ELECTRONIC MEDIA FOR ERIC COLLECTION SUBSCRIBERS ONLY, HAS BEEN GRANTED BY</p> <p>_____</p> <p>TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)</p>	<p>PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY</p> <p>_____</p> <p>TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)</p>
Level 1	Level 2A	Level 2B
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check here for Level 1 release, permitting reproduction and dissemination in microfiche or other ERIC archival media (e.g. electronic) and paper copy.	Check here for Level 2A release, permitting reproduction and dissemination in microfiche and in electronic media for ERIC archival collection subscribers only	Check here for Level 2B release, permitting reproduction and dissemination in microfiche only
<p>Documents will be processed as indicated provided reproduction quality permits.</p> <p>If permission to reproduce is granted, but no box is checked, documents will be processed at Level 1.</p>		

I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate this document as indicated above. Reproduction from the ERIC microfiche, or electronic media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries.

Signature:	Printed Name/Position/Title: Dian R. Moorhouse, M.B.A. Director, Planning and Accreditation		
Organization/Address: Nova Southeastern University Research and Planning 3301 College Avenue Fort Lauderdale, FL 33314	Telephone: (954) 262-5390	Fax: (954) 262-3970	Date: 7/12/00
	E-mail Address: dian@nova.edu		

### III. DOCUMENT AVAILABILITY INFORMATION (FROM NON-ERIC SOURCE):

If permission to reproduce is not granted to ERIC, or, if you wish ERIC to cite the availability of the document from another source, please provide the following information regarding the availability of the document. (ERIC will not announce a document unless it is publicly available, and a dependable source can be specified. Contributors should also be aware that ERIC selection criteria are significantly more stringent for documents that cannot be made available through EDRS.)

Publisher/Distributor:
Address:
Price:

### IV. REFERRAL OF ERIC TO COPYRIGHT/REPRODUCTION RIGHTS HOLDER:

If the right to grant this reproduction release is held by someone other than the addressee, please provide the appropriate name and address:

Name:
Address:

### V. WHERE TO SEND THIS FORM:

Send this form to the following ERIC Clearinghouse:	
<b>ERIC Clearinghouse on Assessment and Evaluation 1129 Shriver Laboratory (Bldg 075) College Park, Maryland 20742</b>	<b>Telephone: 301-405-7449 Toll Free: 800-464-3742 Fax: 301-405-8134 ericae@ericae.net http://ericae.net</b>

EFF-088 (Rev. 9/97)