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ABSTRACT

The report summarizes a study of the six-year graduation rates of first-time college-degree-seeking undergraduates at Nova Southeastern University (NSU) (Florida). The purpose of the study was to (1) develop research methods that would be in compliance with the Student Right-to-Know Act (SRK), and to further investigate the composition of undergraduate cohorts at the university. The study examined rates of graduation and persistence for cohorts defined in the SRK who entered NSU in fall 1989, 1990, and 1991 as first-time freshmen. Results indicate that about 26 percent graduated within 6 years after entry, below the national rate of 45 percent and the aggregate rate of 53 percent in the Florida State University System. SRK cohorts were found to contain both traditional college-age students and nontraditional students who were older and had delayed college entry. Graduation and persistence rates were calculated for both student groups and for professional/liberal arts and career development program students, for age, and for racial/ethnic groups. Methodology and results are detailed, with data tables included. Comparative enrollments for all Florida independent colleges and universities are appended. (Contains six references.) (MSE)

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UNDERGRADUATE PERSISTENCE AND RATES OF GRADUATION: A COHORT ANALYSIS OF FIRST-TIME IN COLLEGE FRESHMEN

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RESEARCH AND PLANNING



Nova Southeastern University

**Undergraduate Persistence and Rates of Graduation :
A Cohort Analysis of First-Time in College Freshmen**

**Blair Atherton
Director of Institutional Research**

**June 1997
Research and Planning
Report 97-07**

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I would like to express my appreciation to Dr. Daniel Sullivan for his help in developing the list of degree codes used to distinguish between Professional and Liberal Studies students and Career Development students. Special thanks to Eland Tooley who did all of the programming for data collection. I am most grateful for her extraordinary efforts in error checking, and testing of her programs to assure that they produced accurate and reliable data.

EXECUTIVE SUMMARY

Under the Student Right-to-Know Act, institutions are required to disclose six-year rates of graduation of first-time in college, full-time degree-seeking undergraduates to current and prospective students by January 1, 2002. The purpose of this study was twofold: [1] to develop methods for the collection of graduation rate data needed to comply with Student Right-to-Know (SRK) requirements, and [2] to go beyond these basic requirements in an effort to more fully understand the composition of undergraduate cohorts at Nova Southeastern University (NSU) and how the presence of a mix of traditional and nontraditional students affects graduation rates. This study is not intended to serve as a SRK disclosure for distribution to students, parents, or other external constituencies.

The study examined rates of graduation and persistence for SRK cohorts entering NSU in the Fall 1989, 1990, and 1991. Federal regulations mandate the selection criteria for construction of student cohorts that, in general terms, include full-time freshmen entering college for the first time with no prior college credits.

The results indicated that approximately 26% of students in SRK cohorts graduated within six years after entry. This is below an estimated national graduation rate of 45% and the aggregate rate of 53% for the Florida State University System. Nova Southeastern University's four-year graduation rate of 18% for the Fall 1991 SRK cohort was also below the aggregate rate of 32% for the Independent Colleges and Universities of Florida (ICUF) member institutions.

Student Right-to-Know cohorts at NSU were found to contain not only traditional college age students, but also nontraditional undergraduates who were older and delayed entry into college for one or more years. The SRK cohorts contained 25-40% nontraditional students as measured by an age at initial matriculation greater than or equal to 20 years.

Separate graduation rates were obtained for traditional and nontraditional students to gauge their relative contributions to the overall cohort. Members of each cohort were separated into those enrolled in the Professional and Liberal Studies Program (ostensibly traditional undergraduates) and those enrolled in the Career Development Program designed for nontraditional students. An age analysis of the two subcohorts validated the use of these strata to examine graduation and persistence trends for traditional versus nontraditional undergraduates meeting SRK criteria.

The results revealed markedly different patterns of persistence and rates of graduation for the two student types. Sixty to seventy percent of Professional and Liberal Studies students re-enrolled in the fall one year after entry, while 20-40% of Career Development students were still enrolled one year after entry. Differences in 6-year graduation rates were also substantial, ranging from 30-33% for Professional and Liberal Studies students versus 11-18% for Career Development students.

Professional and Liberal Studies SRK cohorts were composed of 87-94% traditional undergraduates. Nevertheless, this subgroup's graduation rate was still substantially below rates cited above for Florida state universities.

A difficulty facing NSU when graduation rates are disclosed to the public is that students meeting SRK selection criteria represent only a small fraction of the undergraduate student body. For example, students in SRK cohorts that entered NSU in Fall 1991 represented only 21% of full-time freshmen, 14% of all freshmen, and 4% of all undergraduates at NSU.

Thus, SRK methodology measured graduation rates for a very small, circumscribed minority of NSU students. Therefore, graduation rates for SRK cohorts are *not* representative of the student body overall.

Nevertheless, the enrollment and retention of traditional undergraduates are of special interest to the Farquhar Center for Undergraduate Studies. The findings reported in this study provide information previously unavailable that should be helpful in enrollment management decisions.

The majority of NSU undergraduates do not meet SRK criteria because they enter with varying numbers of prior college credits. The rate of graduation of this remaining majority of the undergraduate population (i.e., undergraduates other than first-time in college full-time freshmen) is currently unknown. Definition of cohorts of undergraduates with a diverse range of transfer credits upon entering NSU is problematic.

However, transfer students entering NSU with an associate degree have a common baseline for defining a cohort. Three-year graduation rates for associate degree transfer students enrolled full-time at entry ranged from 71% to 82%. In comparison, aggregate rates for students entering the State University System (SUS) or Independent Colleges and Universities of Florida (ICUF) member institutions with an associate degree were 77% and 71%, respectively. Thus, NSU graduates associate degree transfer students at rates comparable to the SUS and ICUF as a group.

Student groups with well defined, uniform starting points in their baccalaureate studies, such as those meeting SRK criteria or transfer students entering with an associate's degree provide limited data concerning bachelor's degree awards for only a small proportion of undergraduates. However, it should not be overlooked that NSU produces large numbers of bachelor's degree recipients each year. Nova Southeastern University awarded a mean of 942 bachelor's degrees annually over the last five years.

Improvements in retention and graduation rates of undergraduates should be given a high priority by the Farquhar Center for Undergraduate Studies. Research and Planning will continue to collect data for SRK and associate's degree cohorts, and report on persistence and graduation rates every other year.

INTRODUCTION

The Student Right-to-Know Act (SRK) was passed into law in 1990 by the 101st Congress. The Act called for disclosure of undergraduate rates of graduation to current and prospective students. The law was spawned in a climate of consumer skepticism about the quality and productivity of institutions of higher education. The Student Right-to-Know Act was intended to provide consumer information to prospective students so that they could make informed decisions concerning which institution to attend.

The requirements of the Student Right-to-Know Act concerning the student population to be studied and reported is very specific. Namely, full-time, degree-seeking freshman entering college for the first time comprise the cohort for which 6-year graduation rates are to be reported (referred to below as SRK cohorts). This group is commonly assumed to be composed of traditional undergraduates - that is, students who enter college immediately after graduation from high school to study full-time.

However, the demographics of undergraduates have changed considerably in the last 10 years. The proportion of nontraditional undergraduates attending postsecondary institutions nationwide is increasing. For example, the US Department of Education's National Postsecondary Student Aid Study revealed that approximately 30% of undergraduates entering private, 4-year, doctoral-granting institutions between 1986 and 1992 were ≥ 20 years old and had delayed entry into college one or more years (Horn and Carroll, 1996). When the nontraditional status of students was based on age at entry and one or a combination of other characteristics such as part-time attendance, financial independence from parents, working full-time while enrolled, having dependents, etc., approximately 60% of undergraduates entering this type of institution were nontraditional. This has resulted in the anomaly where the "nontraditional" has become more common than traditional with regard to student characteristics.

Thus, nontraditional undergraduates are typically older, and often financially independent from their parents. Many work full-time and have family obligations. Because of these factors, nontraditional undergraduates often have highly variable attendance patterns, and they may stop-out or interrupt their studies for variable amounts of time to meet job or family demands, or due to financial limitations. These factors and behaviors are likely to lead to higher dropout rates, multiple transfers, and/or a protracted time to degree.

If the majority of undergraduates at an institution are nontraditional, the implication is that the student cohort defined by SRK may represent a small proportion of the students attending the institution. Moreover, it may include a heterogeneous mix of traditional and nontraditional students.

Since nontraditional students typically take longer to graduate, 6-year graduation rates for SRK cohorts containing substantial numbers of nontraditional students are likely to be lower than for SRK cohorts with exclusively traditional undergraduates. The relative proportions of traditional

and nontraditional undergraduates comprising SRK cohorts varies among institutions. This makes it difficult for students and parents to make valid comparisons of graduation rates among institutions. Moreover, undergraduates that meet SRK selection criteria may represent a minority at many institutions. These factors raise questions about the value and appropriateness of graduation rates of SRK cohorts as required consumer information.

This study seeks to analyze rates of graduation at NSU by examining the composition of SRK cohorts to determine the relative proportion of nontraditional students present in SRK cohorts and their affect on graduation rate. Graduation rates for transfer students entering NSU with an associate of arts degree were also examined in order to develop a broader understanding of graduation patterns at NSU.

METHODS

SRK Cohorts (First-Time in College Full-Time Undergraduates)

The methodology and selection criteria for constructing cohorts and calculating graduation rates was that required by the Student Right-to-Know Act (Federal Register section §668.46, pages 61787-88, December 1, 1995).

Cohorts were composed of the following:

- Full-time certificate or degree-seeking freshmen entering college for the first time in the Fall Term. Also included were degree-seeking students enrolled full-time in the Fall Term who entered NSU in the immediately preceding summer term.
- Students (as defined above) entering college for the first time with advanced standing (i.e. previous college credits earned while still in high school or advanced placement credits) were included in the cohort.
- Only students coded as EFR or FR at entry and who had no transfer credits or prior degrees were included in the cohort.

The cohorts in this study were constructed in March and April 1997 based on student data in the Student Information System (SIS) at that time. Because of peculiarities in the SIS, certain undergraduate groups had to be categorically excluded from cohorts in order to assure compliance with SRK selection criteria. In particular, students enrolled in undergraduate programs of the Health Professions Division were excluded because 60-90 prior undergraduate credits are required for admission. In order to avoid errors in the number of certificate-seeking students, measures had to be taken to exclude non-degree seeking students enrolled to complete specific undergraduate courses required for certification or recertification by the Florida Board of Education, since these students do not receive a certificate award from NSU.

Beginning with the Fall 1996 Term and thereafter, future cohorts will be constructed on November 8 each year in conjunction with data collection for the Integrated Postsecondary Education Data System (IPEDS) Fall Enrollment Survey. This is required by the National

Center for Educational Statistics (NCES) so that first-time in college freshmen reported in the Fall Enrollment Survey will be consistent with those reported in the IPEDS Graduation Rate Survey to be implemented in the Fall of 1997. The cohort data file will be saved on tape or disk in order to preserve student information at the time of first enrollment at the University.

Graduation rates were calculated by dividing the number of students in the initial cohort who graduated as of June 30 by the total number of students in the original entering cohort. Persistence rates shown in Figures 1 and 5 represent the number of students in a particular cohort that were still enrolled in sequential fall terms following initial entry.

Segmentation of SRK Cohorts into Career Development and Professional & Liberal Studies Students

Nova Southeastern University offers two baccalaureate degree program formats. The Professional and Liberal Studies Program was designed for traditional undergraduates attending classes primarily full-time during the day. The Career Development Program provides evening and weekend classes for nontraditional students who delayed entry into college, or who returned to complete their degree. Many students in the Career Development program work full-time and/or have family responsibilities.

Traditional undergraduate students were operationally defined as first-time in college entering freshmen with age at matriculation (as of August 15) of 17-19 years. Nontraditional students were defined as entering freshmen who delayed first entry into college by one or more years. Delayed entry was operationally defined by age at matriculation of greater than or equal to 20 years. These definitions were used to test the assumption that first-time in college traditional undergraduates enroll in the Professional and Liberal Studies Program while first-time in college nontraditional undergraduates enroll in the Career Development Program.

Degree and/or major codes were used to classify students as Career Development or Professional and Liberal Studies. The list of degree and major codes used to categorize students is presented in Appendix A, available upon request. The list was developed in consultation with Dr. Daniel Sullivan in the Farquhar Center for Undergraduate Studies.

Cohorts of Undergraduates Entering with an Associate of Arts Degree

Associate degree transfer cohorts included full-time students entering NSU for the first time in the fall or immediately preceding summer term with an associate of arts degree. Two- and three-year graduation rates were calculated as of June 30.

RESULTS

Graduation and Persistence Rates

This part of the study focused only on freshmen meeting the SRK selection criteria. Table 1 shows that in Fall 1991 first-time in college full-time freshmen represented only 21% of full-time freshmen at NSU and only 14% of all freshmen. Thus, freshmen included in SRK cohorts were a small minority of freshmen; therefore, their rates of persistence and graduation do not reflect the rates for undergraduates in general.

Table 1
Graduation and Persistence Rates of SRK Student Cohorts

Cohort	Number at Entry	Percent of Full-Time Freshmen	Percent of All Freshmen	Percent of All Undergraduates	Percent Six Years after Entry		
					*Graduated	Still Enrolled	Still Enrolled + Graduated
**Fall 1991	144	21%	14%	4%	26%	6%	32%
Fall 1990	164	38%	24%	5%	27%	1%	28%
Fall 1989	204	42%	26%	7%	26%	2%	28%

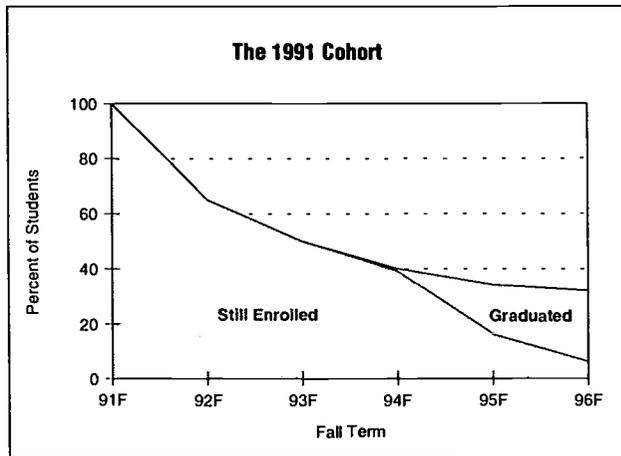
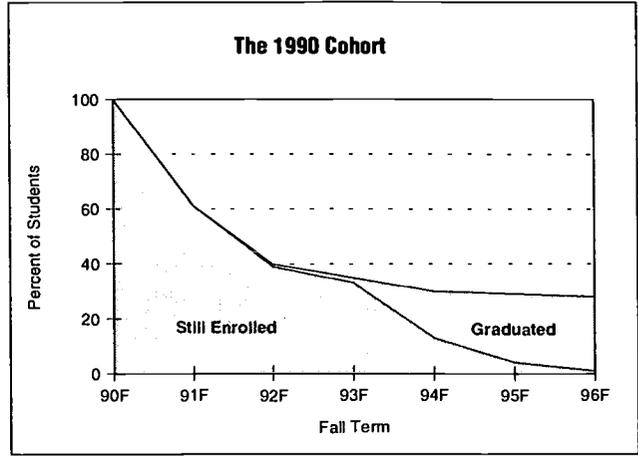
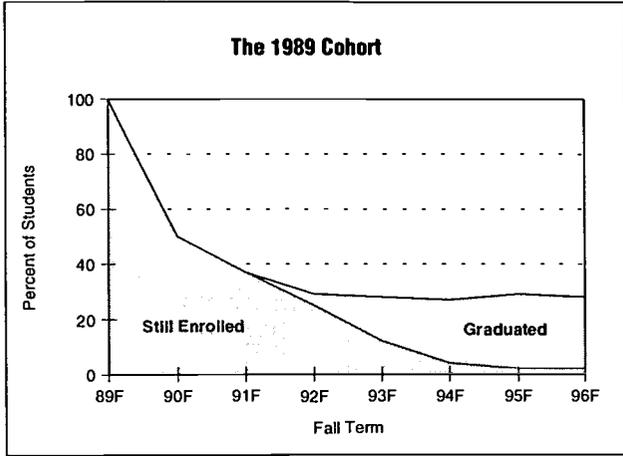
*Includes students awarded a certificate or a bachelor's degree as of June 30 of the end of their sixth year.

**Graduation and persistence data for the Fall 1991 cohort are as of the end of their fifth year (as of June 30, 1996).

Table 1 also shows the percentage of each cohort that were awarded a certificate or bachelor degree within six years. The data indicate that approximately 30% of each cohort graduated from NSU or were still enrolled within six years. Thus, attrition over the six-year period was approximately 70% for the small groups of first-time in college full-time freshmen attending NSU.

Figure 1 shows the time course of persistence and graduation of members of the Fall 1989, 1990, and 1991 cohorts over a five to seven year period. It reveals that the cycle of attrition and graduation is essentially complete six years after initial entry into the University. That is, all but a few members of each cohort will have either graduated or left the University within six years of initial entry. These data also indicate improvements in retention from 1989 to 1991, particularly within the first two to three years after initial entry. For example, the percent of students still enrolled one year after entry increased from 50% for the Fall 1989 cohort to 66% for the Fall 1991 cohort.

Figure 1
Persistence and Graduation of SRK Student Cohorts



Racial/Ethnic and Age Distribution of SRK Cohorts

The racial/ethnic distribution of students in the 1989, 1990, and 1991 SRK Cohorts appear in Figure 2 and Table 2 below. The data show that cohorts were composed predominantly of white students (68-74%). Minority students represented approximately 20-28%, and international students approximately 4-8%. Therefore, attrition cannot be ascribed to the presence of large numbers of minority students in the cohorts.

Figure 2
Racial/Ethnic Composition of SRK Cohorts

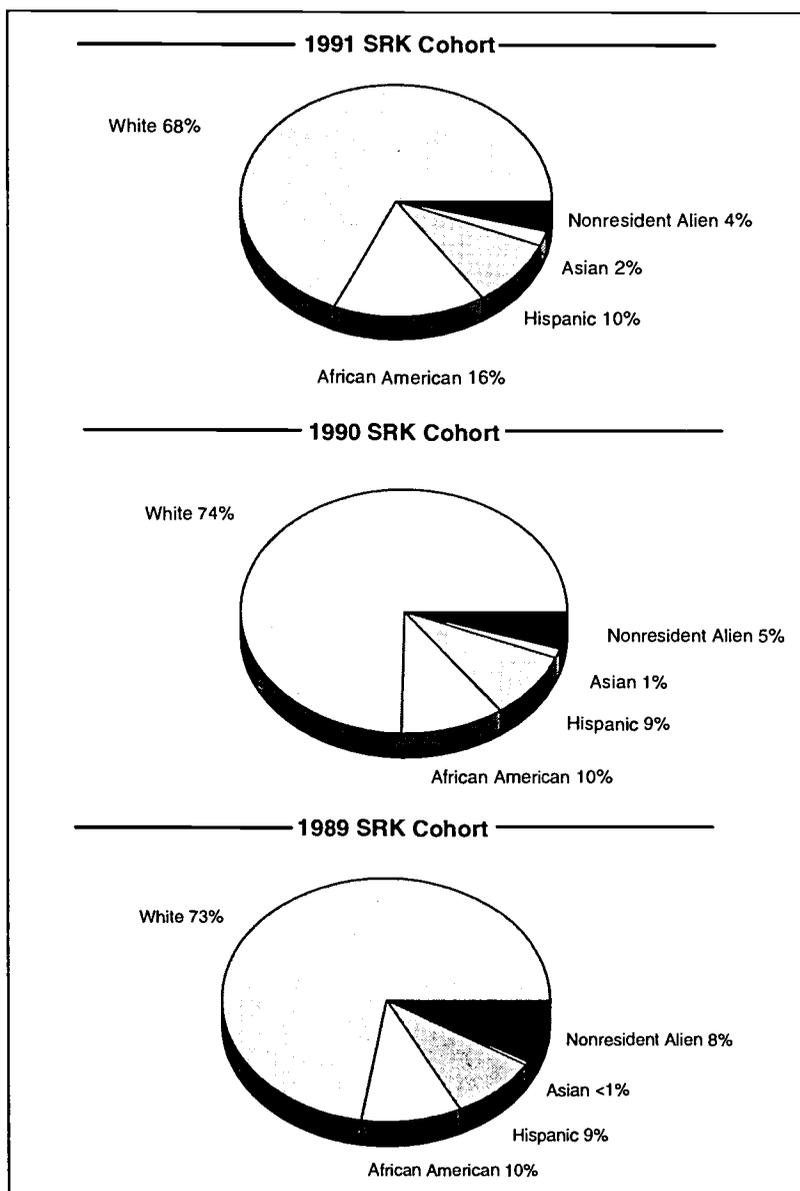


Table 2
Racial/Ethnic and Gender Composition of SRK Cohorts

	Nonresident Alien	African American	American Indian or Alaskan Native	Asian or Pacific Islander	Hispanic	White, Non-Hispanic	Race/Ethnicity Unknown	Grand Total	
								All Students	Men Women
Entering Cohort Fall 1991 Percent	6 4%	23 16%	0 0%	3 2%	14 10%	98 68%	0 0%	63 44%	81 56%
Graduated in 5 Years (cum)	2	5		2	5	24		16	22
Still Enrolled 96F	1	2		1	0	4		5	3
<u>Graduated + Still Enrolled 96E</u> Number Percent of category	3 50%	7 30%		3 100%	5 36%	28 29%		21 33%	25 31%
Entering Cohort Fall 1990 Percent	8 5%	16 10%	0 0%	2 1%	15 9%	122 74%	1 1%	77 47%	87 53%
Graduated in 6 Years (cum)	5	2		2	5	31	0	16	29
Still Enrolled 96F	0	0		0	0	1	0	1	0
<u>Graduated + Still Enrolled 96E</u> Number Percent of category	5 63%	2 13%		2 100%	5 33%	32 26%	0 0%	17 22%	29 33%
Entering Cohort Fall 1989 Percent	16 8%	20 10%	2 1%	1 0%	19 9%	146 72%	0 0%	67 33%	137 67%
Graduated in 7 Years (cum)	1	6	0	0	6	42		16	39
Still Enrolled 96F	0	2	0	0	1	1		1	3
<u>Graduated + Still Enrolled 96E</u> Number Percent of category	1 6%	8 40%	0 0%	0 0%	7 37%	43 29%		17 25%	42 31%

1 1 1

Figure 3 presents data on the proportion of each cohort that graduated or were still enrolled within five to seven years by racial/ethnic group. The limited data in Table 3 suggest that minority students in SRK cohorts graduate and persist at NSU at rates at least comparable to that of white students. It should be noted that, except for white students, the numbers of students in other racial/ethnic categories are very low in each cohort (fewer than 25; see Table 2). A more encompassing study of the persistence of particular racial/ethnic groups would be needed to provide data adequate for enrollment planning.

Figure 3
Proportions of Racial/Ethnic Groups Graduated or Still Enrolled

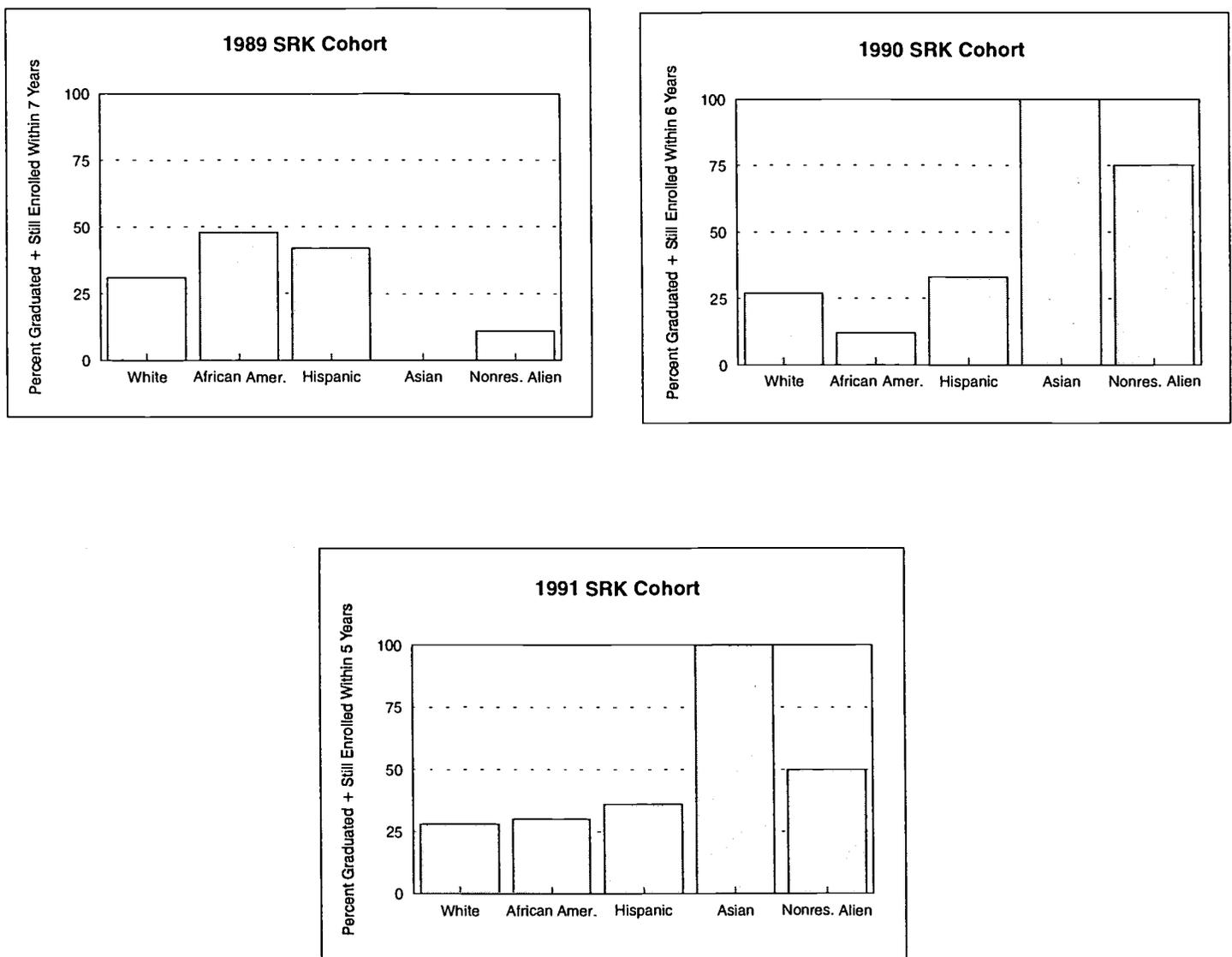
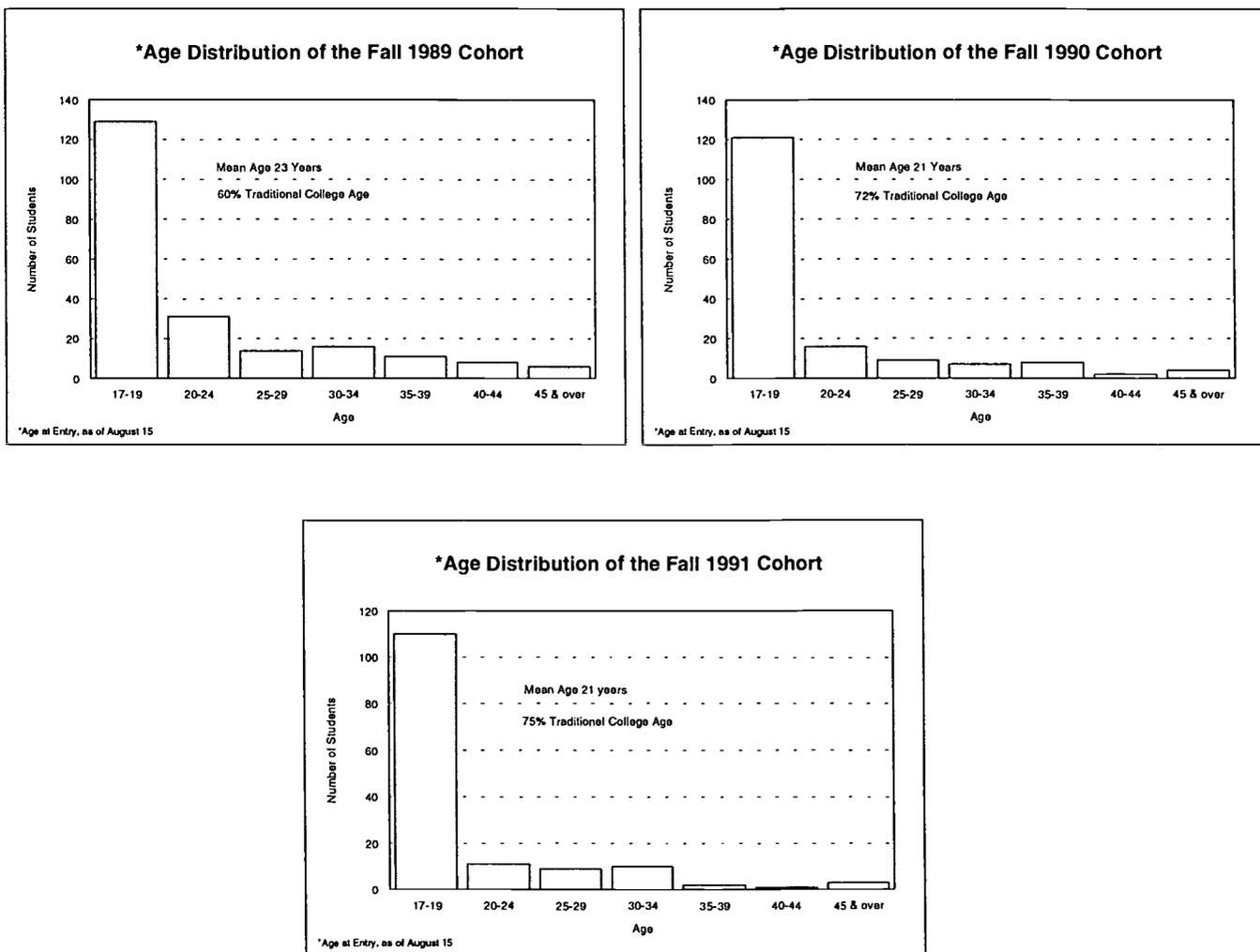


Figure 4 shows the age distribution of students in the three cohorts. The mean age at entry was 21-23 years. The proportion of students of traditional college age in the cohorts ranged from 60-75%.

Traditional undergraduates entering college directly from high school typically start college at 18 or 19 years old. Students that enter college for the first time at 20 years and older have delayed starting college by one or more years; this group is considered nontraditional due to delayed entry into college. The longer students delay, the more likely it is that they have job and family commitments, and their risk of not completing a degree increases.

Figure 4
Age distribution of SRK Cohorts



Proportion of Traditional and Nontraditional Students in SRK Cohorts

In order to gauge further the relative contributions of traditional and nontraditional students to rates of persistence and graduation, the cohorts were segmented by program format. The Professional and Liberal Studies Program was designed for traditional undergraduates attending classes primarily full-time during the day, and the Career Development Program provides evening and weekend classes for nontraditional students.

Table 3 shows the proportion of Professional and Liberal Studies students versus Career Development students in the cohorts. Approximately 70-80% of students in SRK cohorts were enrolled in the Professional and Liberal Studies Program.

Table 3
Distribution of Students in SRK Cohorts by Program Format

Cohort	Number at Entry	Percent of Total Cohort	Percent Six Years after Entry		
			*Graduated	Still Enrolled	Still Enrolled + Graduated
**Fall 1991					
Prof. & Lib. Studies	113	78%	30%	4%	34%
Career Development	31	22%	13%	10%	23%
Fall 1990					
Prof. & Lib. Studies	131	80%	30%	1%	31%
Career Development	33	20%	18%	3%	21%
Fall 1989					
Prof. & Lib. Studies	141	69%	33%	2%	35%
Career Development	63	31%	11%	3%	14%

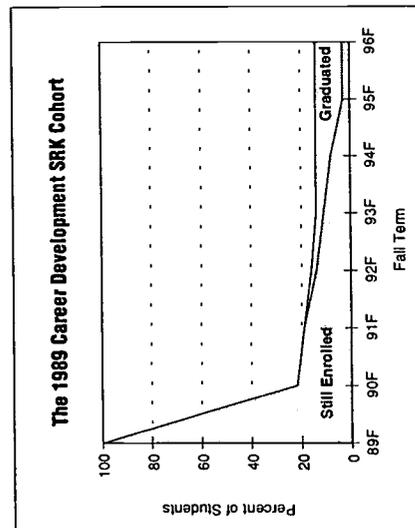
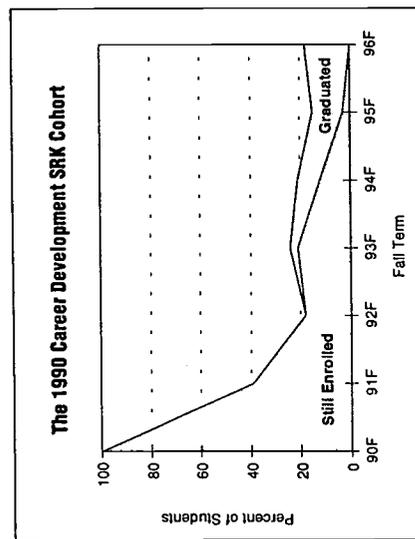
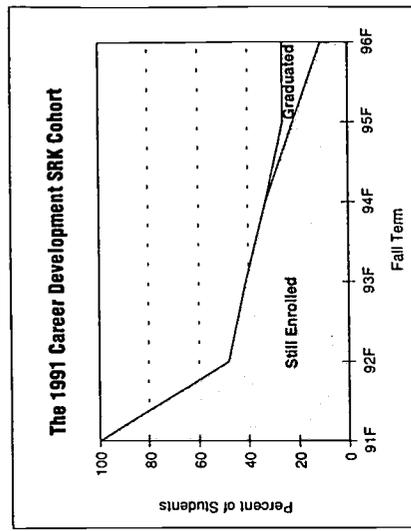
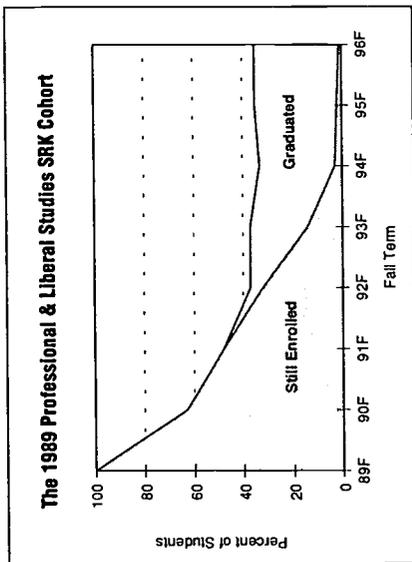
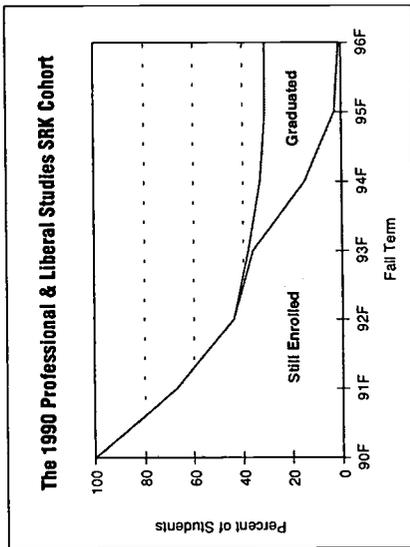
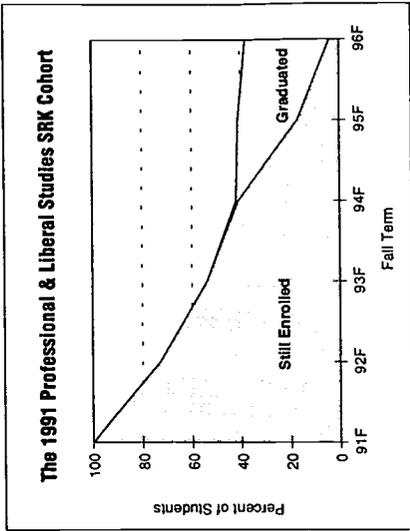
*Includes students awarded a certificate or a bachelor's degree as of June 30 of the end of their sixth year.

**Graduation and persistence data for the Fall 1991 cohort are as of the end of their fifth year (as of June 30, 1996).

Students enrolled in the two programs differed in their rates of persistence and graduation. Approximately one-third of Professional and Liberal Studies students were still enrolled or graduated after 6 years versus less than one-fourth of Career Development students.

Figure 5 shows the time course of persistence and graduation for the Professional and Liberal Studies and Career Development components of the SRK cohorts. These data reveal that larger proportions of Professional and Liberal Studies students persist and graduate than their Career Development counterparts. The data also indicate that retention one year after entry improved between 1989 to 1991 in both programs, but there was little improvement in retention in subsequent years, except for the 1991 cohorts of Professional and Liberal Studies and Career Development students.

Figure 5
Persistence and Graduation of SRK Cohorts by Program Format



Examination of the age distribution of the Professional and Liberal Studies and Career Development components of each SRK cohort indicated that students in the Professional and Liberal Studies Program subcohorts were almost exclusively traditional college age at entry (mean age 18 ; 87-94% traditional college age). Similarly, students in the Career Development Program subcohorts had a mean age of 30, with 87-100% of nontraditional college age. These data provide a measure of the precision with which persistence and graduation data for the two programs reflect patterns for traditional versus nontraditional students.

Other Measures of Degree Completion

Transfer Students

First-time in college entering freshmen represent a minority of freshmen (Table 1). The majority of undergraduates enter NSU with varying numbers of transfer credits and/or an associate's degree. As an indicator of transfer student success, graduation rates of full-time transfer student cohorts who entered NSU with an associate of arts (A.A.) degree from one of the Florida community colleges were analyzed. Transfer students entering with an A.A. degree were chosen because they have a common starting point for defining a cohort.

As shown in Table 4, full-time students (i.e., enrolled for 12 credit hours or more during first term of entry) entering the University with an A.A. degree have high rates of graduation; approximately one-half to two-thirds graduated within two years, and 70-80% graduated within three years.

Table 4
Two- and Three-year Graduation Rates of
Full-Time Transfer Student Cohorts Entering with
an Associate of Arts Degree from a Florida State Community College

Cohort	Number of Entering A.A. Degree Transfers	Percent Graduated	
		Within 2 Years	Within 3 Years
*Fall 1992	55	64%	82%
Fall 1993	59	46%	71%
Fall 1994	63	46%	NA

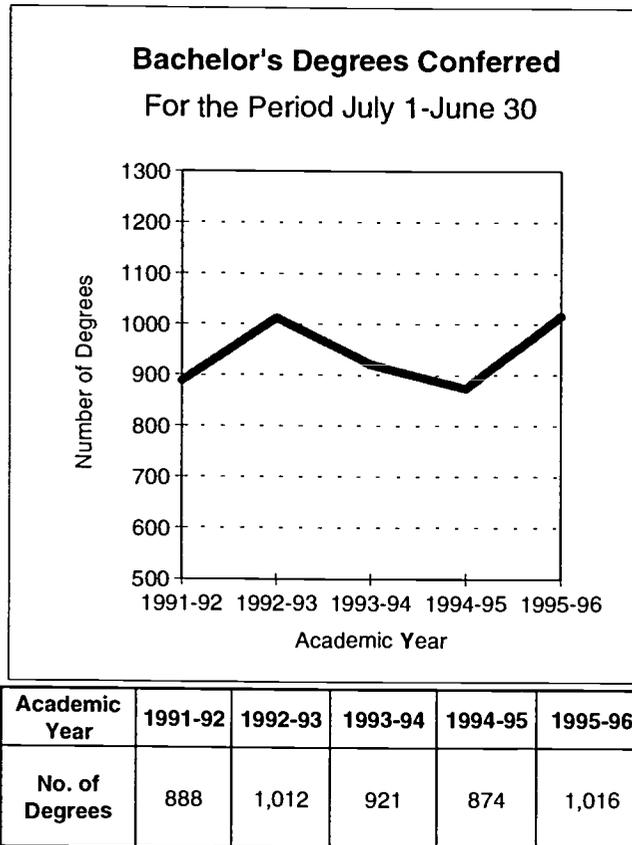
*The proportion of the Fall 1992 cohort graduated within four years was 83%.

Approximately 100-150 full-time and part-time transfer students enter the University with an A.A. degree each fall. However, the majority of transfer students entering NSU do not have an associate's degree.

Overall Output of Bachelor's Degree Recipients

Rates of graduation of circumscribed cohorts of students might suggest that NSU produces small numbers of bachelor's degree recipients. In fact, overall productivity on an annual basis is quite substantial. Figure 6 shows trends in the number of bachelor's degrees awarded by NSU over the last five years. During this period NSU awarded a mean of 942 bachelor's degrees per year.

Figure 6
Total Bachelor's Degrees Awarded Annually



Source: IPEDS Completions

DISCUSSION

Under the Student Right-to-Know Act, institutions are required to disclose six-year rates of graduation of first-time in college, full-time degree-seeking undergraduates to current and prospective students by January 1, 2002. However, a Graduation Rate Survey is being added to the US Department of Education IPEDS suite of federal reports in Fall 1997 that asks institutions to report graduation rates for the Fall 1991 cohort. This will make graduation rate data available to anyone willing to extract it from the National Center for Education Statistics data base. Publishers of college guidebooks and magazines, such as *US News and World Report*, are already asking institutions for this data. These developments will likely stimulate many institutions to launch or expand retention programs to improve their completion rates.

Data reported in this study resulted from efforts to develop methods for NSU to collect data required for SRK. However, the study went beyond merely collecting the basic data required by SRK in order to understand more fully the composition of SRK cohorts of NSU undergraduate students and how the presence of a mix of traditional and nontraditional students affects graduation rate.

An important contextual finding was that first-time in college, full-time degree-seeking freshmen (i.e., students meeting SRK criteria) represented only a small fraction of the undergraduate student body. Thus, SRK methodology measured graduation rates for a very small, circumscribed minority of NSU students. Therefore, graduation rates for SRK cohorts were *not* representative of the undergraduate student body in general. The majority of NSU undergraduates do not meet SRK criteria because they enter with varying numbers of prior college credits.

Moreover, Nova Southeastern University ranked 18th out of 20 ICUF institutions in the proportion of Fall 1995 undergraduates that were first-time in college entering freshmen (see Appendix B). Thus, graduation rates for SRK cohorts at NSU are even less representative of overall rates for undergraduates than they are for most ICUF institutions.

SRK cohorts at NSU had six-year graduation rates of approximately 26%. This is below an estimated national graduation rate of 45% across all types of colleges and universities, and a rate of 72% for private universities (Astin et al, 1996). It is also below the aggregate rate¹ of 53% and range of 33-63% for the Florida State University System (1994-95 SUS Fact Book).

Astin et al (1996) found that nine-year graduation rates were only 1-2% higher than six-year rates. This is consistent with the finding that the seven-year graduation rate for the 1989 SRK cohort at NSU increased by only 1% compared to the six-year rate. This combined with data on

¹Aggregate graduation rates were calculated as follows:

The total number of first-time in college full-time students in the base fall cohort graduated system/sector-wide divided by the total number of first-time in college full-time students in the base fall cohort system/sector-wide at initial entry.

persistence indicates that approximately 98% of students in SRK cohorts at NSU will have either graduated or left the University within six years of initial entry.

The aggregate four-year graduation rate for ICUF member institutions was 32% for the Fall 1991 SRK cohort, with a range of 8-60% (1996 Postsecondary Accountability Review). The comparable four-year graduation rate for NSU was 18%. Thus, graduation rates of SRK cohorts at NSU were substantially below that of many public and private institutions in the state.

Graduation data by gender or racial/ethnic group did not reveal differences that would justify focusing recruiting or retention efforts on any particular group. Based on the limited data available in this study regarding graduation rates for specific racial/ethnic groups, it appears that students from minorities graduate at rates comparable to the white majority in SRK cohorts.

A potential reason for lower graduation rates at NSU compared to national, Florida public, or ICUF institutions might be the presence of large numbers of nontraditional students in NSU cohorts. Rates of graduation of nontraditional students are known to be substantially lower than those of their traditional counterparts (Horn and Carroll, 1996).

In fact, SRK cohorts at NSU did contain not only traditional college age students, but also nontraditional undergraduates who were older and delayed entry into college for one or more years. The SRK cohorts contained 25-40% nontraditional students as measured by age at initial matriculation greater than or equal to 20 years.

In order to obtain separate graduation rates for traditional and nontraditional students and to gauge their relative contributions to the overall cohort, members of each cohort were separated into those enrolled in the Professional and Liberal Studies Program (ostensibly traditional undergraduates) and those enrolled in the Career Development Program designed for nontraditional students. An age analysis of the two subcohorts validated the use of these strata to examine graduation and persistence trends for traditional versus nontraditional undergraduates meeting SRK criteria.

The results revealed markedly different patterns of persistence and rates of graduation for the two types of student. Differences in six-year graduation rates were substantial, ranging from 30-33% for Professional and Liberal Studies students versus 11-18% for Career Development students.

However, the presence of nontraditional students in SRK cohorts was not sufficient to explain low rates of graduation for NSU when compared to values for national, Florida public, or ICUF member institutions. Professional and Liberal Studies SRK cohorts were composed of 87-94% traditional undergraduates. Nevertheless, this subgroup's graduation rate was still substantially below rates for the aforementioned institution groups. Consequently, other explanations for the comparatively low rates of graduation and high rates of attrition at NSU must be sought, particularly for traditional undergraduates.

The rate of graduation of the remainder of the undergraduate population (i.e., undergraduates other than first-time in college full-time freshmen) is currently unknown. Definition of cohorts of undergraduates with a diverse range of transfer credits upon entering NSU is problematic.

However, transfer students entering NSU with an associate's degree have a common baseline for defining a cohort. Three-year graduation rates for associate's degree transfer students ranged from 71% to 82%. In comparison, aggregate rates for students entering the SUS or ICUF member institutions with an associate's degree were 77% and 71%, respectively. Thus, NSU graduated associate's degree transfer students at rates comparable to the SUS and ICUF as a group (1994-95 SUS Fact Book; 1996 Postsecondary Accountability Review). This is an important achievement that helps to offset the lower rates for SRK cohorts.

The small number of graduates resulting from small groups of students in SRK cohorts might suggest that NSU produces few baccalaureate recipients. In fact, NSU awards large numbers of bachelor's degrees each year. The University awarded a mean of 942 bachelor's degrees annually over the last five years. To provide some perspective, the ratio of bachelor's degrees awarded during the 1995-96 fiscal year to the Fall 1995 undergraduate enrollment at NSU was 28%. Comparable ratios for Florida Atlantic University, the University of Central Florida, the University of North Florida, and the University of South Florida ranged from 27-30%. These ratios suggest that NSU's overall productivity is similar to that of Florida state universities, even though its rate of graduation for SRK cohorts is lower than the SUS.

The Student Right-to-Know Act has broad implications not only for NSU, but also for all colleges and universities. The purpose of the legislation was to provide information to students that would help them choose which college to attend. Students and parents who will use this information as part of their decision process will obviously be comparing graduation rates of selected colleges and universities. In addition, state agencies and accrediting bodies may also make such comparisons in an effort to assess institutional effectiveness.

Legislators may have underestimated the difficulties that arise in attempting to compare graduation rates of institutions with diverse missions and student characteristics. For example, the proportion of nontraditional students contained in SRK cohorts may vary widely among institutions. As shown in this study, their presence in cohorts decreases the graduation rate of the overall cohort.

Furthermore, institutional characteristics are important variables to consider when attempting to make comparisons of graduation rates. For example, institutions vary widely in selectivity (i.e., admissions standards and requirements), in the academic demands placed on students once admitted, and in the amount of remedial and/or academic support they provide.

All of these factors influence the probability of students completing their degree at the institution. In other words, how can one compare a highly selective institution that has very high admissions standards, admitting only the "cream of the crop," with one that has low admission standards in order to provide access to college for average or below average students?

Such comparisons are not valid, and they may result in erroneous conclusions by the public and other constituencies regarding the comparative quality, effectiveness, and productivity of institutions with very different missions and characteristics. Legislators may have overlooked the fact that much of the public is unaware of the many factors that must be taken into account in order to make valid comparisons between institutions, and therefore make good decisions.

While institutional disclosure statements may be able to address these problems to some extent, graduation rate data reported by college guidebooks and in *US News and World Report's* "America's Best Colleges" are not likely to address such ambiguities. Thus, all except the most savvy of consumers will likely accept the data at face value for (often invalid) comparisons among institutions.

It remains to be seen what impact SRK disclosures and publication of graduation rates in directories and magazines will have on college and university enrollments. NSU should strive to achieve graduation rates that will maintain and enhance its competitiveness in Florida, since the majority of its students are in-state. Factors identified in alumni surveys, such as convenience, location, types of programs available, and small class size are likely to continue to be strong influences in students' decisions to attend NSU.

However, recent surveys of graduates of the Farquhar Center for Undergraduate Studies did not focus on any specific subpopulation of undergraduates. The majority of respondents were graduates of the Career Development Program. A study focused specifically on members of SRK and A.A. transfer cohorts may be valuable to admissions and student services personnel.

Students and parents are likely to see graduation rates for NSU in college guide books, *US News and World Report*, or eventually in NSU disclosure statements. Therefore, it would be in the best interests of the University to seek ways to improve rates of retention and graduation. The University might want to consider the national graduation rate of 45% as a potential goal for the Professional and Liberal Studies Program.

As a first step toward achieving this goal, the Farquhar Center for Undergraduate Studies may want to contact members of SRK cohorts and A.A. transfer cohorts to determine factors that contributed to students remaining at NSU through graduation and why A.A. recipients transferred to NSU. Similarly, the Center may want to contact members of SRK cohorts who left the University to determine their reasons for leaving and whether or not they transferred to another institution. Such information may well point to attributes of graduates versus noncompleters and/or attributes of the institution that suggest ways to more effectively recruit, retain, and graduate first-time in college freshmen.

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Appendix B
First-Time in College (FTIC) Freshmen at Independent Colleges and Universities of Florida
Ranked by Total Enrollment
Fall Term 1995

College or University	FTIC		Total		FTIC Freshman as Percent of		
	Freshman	Total	Freshman	Undergraduates	Freshman	Undergraduates	All Students
Nova Southeastern University	215	554	3,688		39%	6%	2%
Saint Thomas University	78	220	1,121		36%	7%	2%
Saint Leo College	177	1,119	7,071		16%	3%	3%
Barry University	209	1,168	4,836		18%	4%	3%
Florida Institute of Technology	375	572	1,780		66%	21%	9%
Warner Southern College	59	86	581		69%	10%	10%
University of Tampa	333	801	2,045		42%	16%	13%
Rollins College	454	982	2,642		46%	17%	14%
Jacksonville University	358	488	2,063		73%	17%	15%
Embry-Riddle Aeronautical University	650	1,382	3,917		47%	17%	16%
Ringling School of Art and Design	143	247	823		58%	17%	16%
Stetson University	472	552	1,950		86%	24%	16%
Palm Beach Atlantic College	341	590	1,718		58%	20%	18%
Lynn University	290	548	1,449		53%	20%	19%
Florida Southern College	495	780	2,500		64%	20%	19%
Eckerd College	334	428	1,335		78%	25%	25%
Flagler College	357	456	1,426		78%	25%	25%
Florida Memorial College	377	733	1,457		51%	26%	26%
Bethune-Cookman	745	1,297	2,402		57%	31%	31%
Clearwater Christian College	166	197	532		84%	31%	31%

Data Source: 1995 IPEDS Fall Enrollment Surveys

Table adapted from Research and Planning Report 96-23

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UNIVERSITY

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