



At-Risk Students:
A Cross-Sector
Analysis

GRADUATING AT-RISK STUDENTS: A CROSS-SECTOR ANALYSIS

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About the Imagine America Foundation

The Imagine America Foundation (IAF), established in 1982, is a not-for-profit organization dedicated to providing scholarship, research and training support for the career college sector. Since its inception, the Foundation has provided over \$40 million in scholarship and award support for graduating high school seniors, adult learners and U.S. military veterans attending career colleges nationwide through its award-winning *Imagine America*® programs. The Foundation also publishes vital research publications for the higher education sector, honors achievement in career education and offers faculty development training. For more information about the Imagine America Foundation, please visit www.imagine-america.org.

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ABOUT THE IMAGINE AMERICA FOUNDATION

stablished in 1982, the *Imagine America* Foundation is a not-for-profit organization dedicated to serving the career college community by providing scholarships and awards, conducting sector research, offering faculty training, honoring achievement in career education, and supporting and promoting the benefits of career colleges to the general public.

The Foundation currently sponsors three scholarship and award programs, including Imagine America for graduating high school seniors; the Military Award Program (MAP) for active duty, reservist or honorably discharged U.S. military personnel; and the Adult Skills Education Program (ASEP) for adult learners. To date, through the Imagine America® programs, the Foundation has awarded over \$40 million in scholarships and awards to students enrolling at career colleges and universities all over the United States and Puerto Rico.

Through its supporters, the Foundation sponsors additional programs such as the Imagine America Promise scholarship program for adult students. Since its inception, the Promise scholarship program has secured over \$500,000 in grants, which have supported over 600 continuing career college students. The LDRSHIP Award recognizes exceptional military personnel who have decided to further their education by attending participating career colleges. LDRSHIP

Award honorees receive up to \$5,000 toward their education.

Educational research has been an integral component of the Foundation's activities since its establishment in 1982. In 2007, the Foundation created the 21st Century Workforce Fund. One of the goals of the Fund is to conduct research that elevates the public understanding of the vital role of career colleges and their students nationwide. The Foundation, through financial support from the 21st Century Workforce Fund, has initiated research studies focusing on the economic impact of career colleges, their role in meeting the nation's current skilled-worker shortage and other broad public policy issues facing the higher education sector.

Thousands of career college instructors have been and continue to be successfully trained through the Center for Excellence in Education (CEE), a unique lifecycle training process for faculty development. Initiated in 2008, a case study conducted by the ROI Institute, found that the CEE Faculty Development Program was a positive investment with a return on investment of 517%. The full report is available through the Imagine America Foundation.

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PREFACE

hink about college in America. Traditionally speaking, this brings to mind images of young people engaged in weekday classes combined with dorm life, sports teams, social experiences and opportunities to explore their interests en route to attaining a four-year degree. For a non-traditional student, however – one who is likely to be older, a racial minority and/or a military veteran, less academically prepared, and working or juggling other responsibilities – this picture doesn't fit.

Can these students, whose American dream for higher education focuses less on the college experience and more on self-improvement via specific professional or occupational goals, count on career colleges to deliver?

If they don't, they probably should. Statistically, career colleges deliver good student outcomes in successfully educating non-traditional students. As such, they are key players in individualized education and skill development for adults who are searching for ways to quickly and efficiently increase



their capacity and career options. This, in turn, is important to the collective recovery of the U.S. economy and its ability to rebound and compete in the global marketplace.

In sizing up the impact of career colleges compared to other types of educational institutions, this study focused on two outcome measures: student retention in school (from fall to fall) and student program completion or graduation.

Initial data analysis was derived from the 2006 annual surveys conducted by the U.S. Department of Education's National Center for Education Statistics (NCES) at the 6,750 institutions participating in federal student financial aid (Title IV) programs. Of these, 40 percent are career colleges.

Secondary analysis derived from the Beginning Postsecondary Students (BPS) survey, a longitudinal study of approximately 19,000 beginning students from 1,360 institutions at three- and six-year intervals.

The analysis in the report was divided by type (career college; public institution; and private, not-for-profit) and the length of core programs (four-year, two-year and less-than-two-year).

Findings:

 Not only are career college students, on average, older than students attending other, traditional institutions, but they are also more likely to be of a minority race and affected by social risk factors such as delayed enrollment, lack of high school diploma, income independence, part-time enrollment, single parenthood and/or dependent children, and full-time work during enrollment.

- Career colleges have higher percentages of at-risk students, including students who are affected by multiple, and cumulative, risk factors.
- Career colleges educate a very high percentage of Pell Grant receiving students – a leading indicator of low income status, as Pell Grants are need-based.
- Career college students, regardless of level and with almost no exception, are much more likely than students attending other types of institutions to be older, of color, poor, and from a family that has no educational legacy, i.e., parents who did not pursue postsecondary education.

Despite these apparent barriers to student success, statistical analysis reveals that:

- · Career colleges do a good job of graduating low income/at-risk student populations compared to public institutions.
- Four-year career colleges that are predominately minority-serving exhibit a higher graduation rate than public and private institutions that also serve minority students (47 percent versus 33 percent and 40 percent, respectively).

• Career colleges graduate African-American and Hispanic students at higher rates than public institutions graduate Caucasian students.

This report only touches on why students attending career colleges do as well as or better than students attending other types of institutions.

The report suggests that career colleges work hard to provide appropriate student services and support. Such support could be found in flexible class schedules, one-on-one tutoring, a variety of learning modalities, hands-on practice and faculty who are trained to meet the needs of non-traditional adult learners. Those needs include less time spent in school and training that is directed toward developing occupational skills and enhancing career outcomes.

There is still much to be learned about the successes of career colleges, but this report makes one fact very clear: career colleges remain an important component of our nation's higher education system, particularly for the non-traditional adult student.

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Introduction

he Educational Policy Institute, a non-profit research organization dedicated to the study of educational opportunity, was contracted by the Imagine America Foundation of Washington, D.C., to conduct an analytical study of private, for-profit career colleges in the United States. The overarcing research objective of this study was to analyze how these institutions serve students compared to public and not-for-profit institutions, as measured by various educational outcomes, including retention (e.g., yearto-year persistence) and degree attainment.

Thirty-nine percent of Title IV institutions in the United States are for-profit career colleges enrolling over 2 million students each year - approximately 9 percent of all students attending Title IV institutions (Fact Book, 2009). As the economy looks for answers to a troubling decline in prosperity and employment, career colleges offer programs that provide quick retraining and retooling for workers who have been displaced or are at risk, and also provide additional training for professionals and others who are looking to increase their capacity and career options. Thus, career colleges are becoming increasingly important to our economic recovery and ability to compete in the global marketplace.

The career college sector serves a large number of students who are typically more workforce-oriented than students in other sectors. These students are often seeking postsecondary training to advance their career opportunities rather than a traditional college experience (Chung, 2006). Career colleges tend to serve students who are considered "non-traditional." That is, they are older than traditional college students, may stop out between high school and college, attend college on a part-time basis, are financially independent, work full-time while enrolled, have children and/ or are single parents, or lack a standard high school diploma (Horn & Carroll, 1996). These students tend to be less academically prepared for postsecondary studies and have lower retention and graduation rates than other students (Kipp, 1998).

Students attending career colleges are also more likely to be minority students than those in other sectors. Forty-three percent of students at career colleges are minorities, compared to 34 percent at public institutions and 30 percent at private, non-profit institutions (Fact Book, 2009). Of enrolled career college students, 26 percent of students are African-American and 20 percent are Hispanic.

Factors that Impact Student Success

While our system of higher education is very diverse, there is significant literature that suggests students persist or fail to persist for similar reasons regardless of the type of higher education they pursue. Models of student engagement suggest that said engagement is affected by the social and cultural capital students bring to college, as well as their experience on campus and aspects of the institution (Pascarella, 1985; Porter, 2006). In the mid-1990s, Watson Scott Swail (1995; 2003) developed a retention model that builds on these models of student engagement and outlines three groups of factors influencing student persistence to degree: cognitive factors, social factors and institutional factors.

Cognitive Factors. Briefly stated as the academic ability of the student, cognitive factors relate to the academic ability and preparation that a student brings to his or her postsecondary study. Considerable research to date has demonstrated that measures of high school academic preparedness – as defined as a student's academic curriculum, performance and aptitude – are by far the strongest predictors of degree attainment (Alexander, et. al., 1982; Adelman, 1999; Horn, Kajaku, & Carroll, 2001; Swail, Redd & Perna, 2003).

The assertion that individuals with higher academic ability and preparedness are more likely to be successful in their pursuit of higher education seems to be reasonable and is supported in the literature. Student ability as measured by both high school GPA and college aptitude test scores has been shown to be a strong predictor of college retention and completion (Astin, 1975; Kahn & Nauta, 2001; McGrath & Braunstein, 1997; Tinto, 1993). The scholastic performance of students while attending college is believed to contribute both direct and indirect effects on dropout behavior (Bean, 1990). A number of studies support the proposition that undergraduate grades have a high degree of relationship with persistence (Astin, 1993; DeBerard, Spielmans, & Julka, 2004; Lufi, Parish-Plass, & Cohen, 2003; Murtaugh et al., 1999; Nora et al., 1996; Peng & Fetters, 1978; St. John et al., 2004).

Social Factors. The degree of a student's integration and engagement with a campus's social and academic culture is directly related to his or her persistence in higher education (Swail, Redd, & Perna, 2003). These factors may be measured by variables

such as educational legacy, parental or peer support, the development or existence of career and education goals, and the ability to cope in social situations and under stress. The social condition is especially important for non-traditional students who are often inadequately prepared for the culture of traditional college campuses. Another critical social factor is access to financial support, since, for many non-traditional students, decisions about persistence are driven by the availability of financial resources, including financial aid (Swail, Redd, & Perna, 2003).

Students from low socioeconomic backgrounds face significant challenges for enrolling in postsecondary education. Only one out of three high school graduates from a low socioeconomic status (SES) background enrolls in postsecondary study, and only 15 percent of all low SES youth will ultimately earn a Bachelor's degree (Bedsworth et. al, 2006).

Institutional Factors. The policies and practices of a postsecondary institution as they support students academically and socially can have a powerful influence on student persistence. Issues relating to course availability, content and instruction impact a student's decision to persist, as do support mechanisms such as counseling, tutoring and financial aid (Swail, Redd & Perna, 2003). Swail et al. (2003) proposed that policies and practices in the areas of recruitment and admissions, financial aid, student services, academic services, and curriculum and instruction are critical to supporting student persistence to degree.

Foster (2004) points out that career colleges are the most student-oriented postsecondary option. Due to their businesslike service models, career colleges are more likely than other types of postsecondary institutions to have convenient schedules and locations, shortened program times, and hands-on job training. Students attending career colleges are viewed as customers, and, therefore, the education experience is designed around services rather than around a traditional student affairs model. Career colleges are also better equipped to respond to market demands by creating programs that cater to the needs of the workforce (Roosevelt, 2006).

Even though institutional factors will not be directly explained in this study, the extent of the findings that show that career colleges have high retention and graduation rates for non-traditional higher education students can be ascribed, at least in part, to institutional factors. This analysis demonstrates that career colleges have shown considerable success in graduating students who are traditionally more at-risk than other students. And graduation is the key to future success – economically and socially – for the individual and the nation.

This study is divided into several main sections: a brief discussion of the methodology, a cross-sector analysis of institutional and student characteristics, and a crosssector comparison of student outcome measures.

Methodology

he purpose of this study was to analyze and document the student and institutional outcomes of career colleges as compared to other institution types and sectors. Outcomes can be measured in a variety of ways. For our purposes, we have focused on two measures: retention and graduation. Retention, as in those students who begin postsecondary studies one year and return the next, provides us with an indicator of the ability of institutions to keep students during a critical time in the college experience. More students leave higher education during the first year than in any other year, regardless of level. Thus, retention is an important indicator.

Of course, fall-to-fall retention is only a milepost. The ultimate indicator for our review is persistence-to-degree – in other words, graduation. Without a diploma or certificate, most students will not meet their career goals and will be ill-placed to make the same contribution to society as they may with an earned degree in hand.

To prepare for our findings on retention and graduation indicators, we rely on two datasets. The first and primary dataset for our analysis is the *Integrated Postsecondary Education Data System* (IPEDS: 2006)¹. IPEDS is a system of interrelated surveys conducted annually by the U.S. Department of

Education's National Center for Education Statistics (NCES). IPEDS gathers information from every college, university and technical/vocational postsecondary institution that participates in the federal student financial aid (Title IV) programs. The Higher Education Act of 1965, as amended, requires that institutions participating in federal student aid programs report data on enrollments, program completions, graduation rates, faculty and staff, finances, institutional prices, and student financial aid. In this dataset, we are able to present information from 6,750 institutions, representing approximately 14 million students in the 2006 collection year. IPEDS' shortcoming is that its data lacks detailed information on student background demographics and other attributes.

Our secondary analysis requires the use of the *Beginning Postsecondary Students* (BPS) Longitudinal Study, a longitudinal design that collects data related to persistence in and completion of postsecondary education programs. While IPEDS surveys institutions, the BPS surveys students – approximately 19,000 beginning students from 1,360 institutions.

In addition to completion indicators, BPS provides data on the college experience, financial aid, relationships between work and education, and the effect of postsecondary education on the lives of individuals.

With regard to its name, the Beginning Postsecondary Students Longitudinal Study follows students who are enrolled in postsecondary institutions for the first time. Initially, these individuals are surveyed through the National Postsecondary Student Aid Study (NPSAS), a cross-sectional study, to find out how they and their families pay for education beyond high school. BPS surveys students at three- and six-year intervals to provide us with a sampled, but relatively accurate, projection of students in the United States.

The BPS study affords us a longitudinal look at students in the postsecondary sector, starting with students who began in 1995-96 and followed up six years later in 2001, plus a newer cohort from 2003-04 that had its three-year follow-up in 2006 and is scheduled for a six-year follow-up in 2009. The limitation to BPS is in the sample size of students at smaller institutional sectors, such as career colleges, which represent one of 11 enrolled students in the U.S. Thus, we must be considerate in our analysis and reporting when using BPS.

Because of the strengths and limitations of these two databases, we will use data from both surveys to provide a broad yet accurate view of career college students and institutions in the United States.

To analyze this data, the U.S. Department of Education's Data Analysis System (DAS 2.0), a sophisticated online system, was utilized to provide the content illustrated herein. Please note that, due to the limitations in the datasets introduced above, there are cases where we are unable to make comparisons on certain variables due to insufficient sample sizes or other methodological issues.

Institutional and Student Characteristics

he analysis in this report covers approximately 6,750 institutions across the United States.² Career colleges comprise the largest percentage of institutions – 41 percent, or 2,750 of these institutions – followed by public institutions (31 percent; 2,061) and private, not-for-profit institutions (29 percent; 1,939).

Within these three sectors, institutions are additionally divided by the length of their core degree programs. For instance, in total, there are 2,747 four-year institutions, of which almost 60 percent are private, not-for-profit (1,621); 24 percent are public (663); and 17 percent (463) are private, for-profit (better known as career colleges). Of the 2,236 two-year

institutions in our analysis, the public, two-year community college system is the largest group, representing slightly over half (52 percent) of all institutions in this category. Thirty-eight percent of two-year institutions are career colleges (855) and 10 percent are private, not-for-profit institutions (218).

The less-than-two-year level is dominated by career colleges. In total, 81 percent, or 1,432 less-than-two-year institutions are for-profit entities, providing shorter-term educational opportunities. Comparably, there exist 235 public institutions in this category (13 percent) and 100 private, not-for-profit institutions (6 percent).

Figure 1.
Distribution of postsecondary institutions by type/sector, 2006

	TYPE OF INSTITUTION TOTAL	NUMBER OF INSTITUTIONS 6,750
4-Year	Career Colleges Private, Not-for-Profit Public	463 1,621 663
2-Year	Career Colleges Private, Not-for-Profit Public	855 218 1,163
<2-Year	Career Colleges Private, Not-for-Profit Public	1,432 100 235

SOURCE: EPI Analysis using the Integrated Postsecondary Education Data System (IPEDS) Data Analysis System (DAS), 2006, U.S. Department of Education, National Center for Education Statistics.

²The number of institutions varies depending on the particular analysis and the variables utilized.

Institutions are often deemed selective or non-selective in terms of their admissions policies. Approximately half (54 percent) of all institutions in the U.S., according to the IPEDS survey, consider themselves "open admissions" institutions, meaning that they do not select students on the basis of prior education achievements, such as SAT or ACT scores, high school GPA, or class rank. This does not mean they do not consider other factors, such as high school completion, but they abide by a chosen policy to keep their doors open to most students who have the desire to attend.

Two-year public community colleges are, by definition, the most open admissions type of institution in the U.S. system, with 95 percent promoting an open admissions policy. By comparison, only 14 percent of public fouryear and private, not-for-profit four-year institutions consider themselves open admits.

In the career college sector, 45 percent of four-year and 61 percent of two-year institutions are open admissions schools, along with 74 percent of less-thantwo-year institutions (IPEDS 2006).

DEFINING THE CAREER COLLEGE STUDENT

Using the most recent Beginning Postsecondary Student (BPS) study, we can take a snapshot of 2003entering students to gain an understanding of the students in various sectors of higher education. This, in turn, sets the stage for our analysis of student retention and graduation rates in the following section.

Age. As illustrated in Figure 2, the average age of first-year college students in 2003 was 22.2 years, up almost a year since 1995. Most college students in the U.S. are of traditional age, with 79 percent of entering students in 2003 below the age of 24. However, students attending career colleges are much more likely to be adult students. For instance, 42 percent of students attending four-year career colleges are 24 years of age or older, compared with only 4 and 8 percent of students attending four-year public or private, not-for-profit institutions, respectively. Students at two-year career colleges are also older than students in other sectors, with 37 percent of students 24 or older compared with 28 and 26 percent of students at public and private, not-for-profit two-year institutions. Only in the less-than-two-year sector did public institutions serve a greater percentage of adult students.

Race/Ethnicity. Two- and four-year career colleges have a higher percentage of minority students than do other sectors. As can be seen in Figure 3, over 50 percent of students attending four-year career colleges are minority students, compared to approximately 34 percent at public and 32 percent at private, not-for-profit four-year institutions. While a majority of students

Figure 2. Average age and percentage distribution of beginning postsecondary students by age, by institution type/sector, fall 2003

	TYPE OF INSTITUTION	AVERAGE AGE	< 24 YEARS Of Age	24 YEARS OF AGE OR OLDER
	TOTAL	22.2	78.9%	21.1%
4-Year	Career Colleges	24.8	57.8%	42.2%
	Private, Not-for-Profit	19.6	93.3%	6.7%
	Public	19.1	95.6%	4.4%
2-Year	Career Colleges	24.4	62.6%	37.4%
	Private, Not-for-Profit	23.1	73.6%	26.4%
	Public	23.7	72.2%	27.8%
<2-Year	Career Colleges	25.0	58.5%	41.5%
	Private, Not-for-Profit	29.2	51.5%	48.5%
	Public	30.7	30.2%	69.8%

SOURCE: EPI Analysis using the Beginning Postsecondary Students Longitudinal Survey Data Analysis System (BPS: 96/01; BPS: 04/06) (DAS), U.S. Department of Education, National Center for Education Statistics.

Figure 3.

Distribution of beginning postsecondary students by race/ ethnicity, by institution type/ sector, 2003

	TYPE OF INSTITUTION	WHITE, NON- HISPANIC	BLACK, NON- HISPANIC	HISPANIC	OTHER
	TOTAL	61.6%	18.1%	14.3%	9.3%
4-Year	Career Colleges	47.5%	19.5%	12.8%	7.3%
	Private, Not-for-Profit	68.0%	12.4%	8.1%	7.6%
	Public	65.7%	13.2%	9.1%	9.1%
2-Year	Career Colleges	59.3%	22.7%	15.6%	7.1%
	Private, Not-for-Profit	68.5%	17.5%	11.0%	18.5%
	Public	64.9%	14.9%	10.2%	10.5%
<2-Year	Career Colleges	52.0%	27.3%	27.5%	10.2%
	Private, Not-for-Profit	43.9%	27.6%	46.8%	18.0%
	Public	77.1%	15.5%	9.3%	11.3%

SOURCE: EPI Analysis using the Integrated Postsecondary Education Data System (IPEDS) Data Analysis System (DAS), 2006, U.S. Department of Education, National Center for Education Statistics.

NOTE: this data is not necessarily unduplicated due to the allowance of the survey participants to select more than one race/ethnic group. Thus, sums may add up to above 100 percent.

attending two-year institutions are white, non-Hispanic, the percentage at career colleges is higher than at the other sectors: 40 percent of career college students are minorities, compared to 34 percent at public and 31 percent at private, not-for-profit institutions.

At the less-than-two-year institutional level, private, not-for-profit institutions serve the highest percent-age of minority students (56 percent), with career colleges serving 48 percent and public institutions serving 23 percent.

Risk Factors. There are a number of social factors that may impact a student's ability to persist and ultimately attain a postsecondary degree. These include delayed enrollment (from high school to postsecondary school), not having a high school diploma, enrolling part-time rather than full-time, being financially independent, having dependent children, being a single parent, and working full-time while enrolled. While certainly not an exhaustive list of risk factors, these have been identified and measured in the U.S. Department of Education datasets and, therefore, are available for analysis.

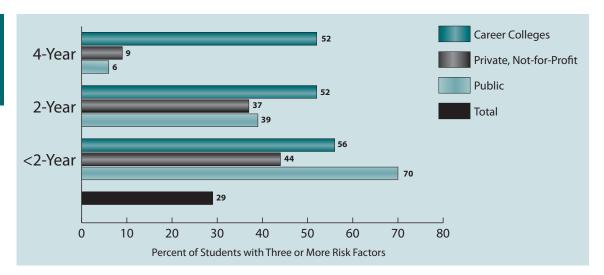
The effect of these risk factors is cumulative (NEA, 2004). In general, the more risk characteristics a student has, the greater the chance that he or she will not complete college. Institutions that enroll a high proportion of these high-risk students will tend to have

lower graduation rates than institutions that enroll students without these risk factors. Simply put, it is more challenging for an institution to retain and graduate high-risk students. It is for this, and other reasons, that some researchers have suggested that simply using graduation rates may not be an adequate – or fair – measure of an institution's success (NEA, 2004; Gold & Albert, 2006).

Career colleges have higher percentages of at-risk students than do other sectors. For example, four-year career colleges have a much higher percentage of students with at least one risk factor (78 percent) versus those at public (24 percent) or private, not-for-profit (21 percent) institutions. At the two-year level, the gap is much smaller, with career colleges serving slightly more of a population of at-risk students – 80 percent – compared to 76 percent at public and 70 percent at private, not-for-profit institutions. The less-than-two-year level is the only sector where public and not-for-profit institutions have a higher level of at-risk students.

As many educators note, the challenge of persistence and graduation for students is enhanced by having multiple risk factors. FIGURE 4 illustrates the percentage of students who have at least three risk factors. In 2003, over half (52 percent) of students attending four-year career colleges had at least three

Figure 4. Percentage of beginning postsecondary students with three or more risk factors, by institutional type/sector, 2003



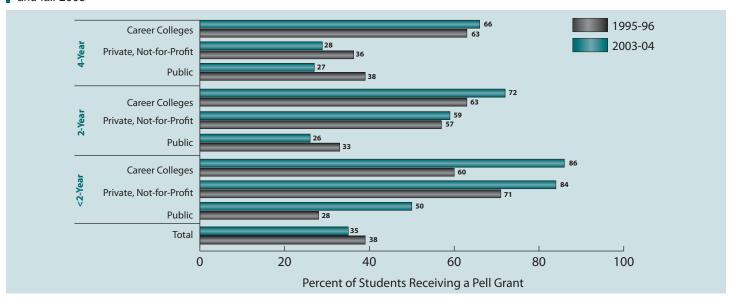
SOURCE: EPI Analysis using the Beginning Postsecondary Students Longitudinal Survey Data Analysis System (BPS:04/06) (DAS), U.S. Department of Education, National Center for Education Statistics.

risk factors, compared to only 9 percent and 6 percent of students attending private, not-for-profit and public institutions, respectively.

Over half of students attending two-year career colleges had at least three risk factors, compared to only 39 percent of students at public two-year institutions. Public, less-than-two-year institutions had the highest percentage of students with three or more factors (70 percent), but more than half of career college students attending less-than-two-year institutions had three or more risk factors.

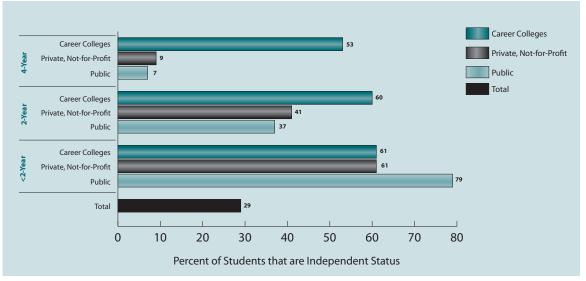
Income/Socioeconomic Status. Approximately one-third (35 percent) of 2003-beginning postsecondary students received a need-based Pell Grant, a decline of about 3 percent from the 1995 study (FIGURE 5). Career colleges educate a very high percentage and number of Pell Grant receiving students. At each level of institution, a higher

Figure 5. Percent distribution and net change of beginning postsecondary students who received Pell Grants, by institution type/sector, fall 1995



SOURCE: EPI Analysis using the Beginning Postsecondary Students Longitudinal Survey Data Analysis System (BPS:04/06) (DAS), U.S. Department of Education, National Center for Education Statistics.

Figure 6.
Percent of independent
beginning postsecondary students, by
institution type/
sector, 2003



SOURCE: EPI Analysis using the Beginning Postsecondary Students Longitudinal Survey Data Analysis System (BPS:04/06) (DAS), U.S. Department of Education, National Center for Education Statistics.

percentage of career college students received Pell Grants than those in other sectors. In 2003-04, 86 percent of students attending less-than-two-year career colleges received Pell Grants, as did 72 percent of students attending two-year career colleges and 66 percent of students attending four-year career colleges. As can be seen in FIGURE 5, other sectors of higher education, with minor exception, served much lower percentages of low income students. For instance, only one third of students attending a four-year public institution received a Pell Grant, as did just 33 percent of those attending a two-year public institution.

Dependency. As seen in FIGURE 6, students attending for-profit institutions are much more likely to be of independent status than students attending other institutions, with the exception of those attending public, less-than-two-year institutions. Independent students are either over the age of 24, married, graduate students, orphans, U.S. military veterans, or have children. In certain exceptions, younger students can petition for independent status if they can prove that they are truly independent from their parents or guardians.

The proportion of independent students at two-year career colleges (60 percent) is much higher than that at

private (41 percent) or public two-year institutions (37 percent). The differences are even greater at the four-year level, where more than half of all career colleges are independent, compared to 9 percent and 7 percent at private and public colleges. Because career college students are more likely to be independent students, they carry a heavier burden in terms of their ability to persevere in higher education.

First Generation Students. Students who are designated "first-generation" are those whose parents did not pursue higher education. Typically, this group has a more significant challenge to prepare, enroll and succeed in higher education, because they do not always have the support that other students whose parents went to college have. In fall 2003, approximately one-third (34 percent) of entering students in U.S. higher education came from families where the highest educational certification was a high school diploma.

Students attending career colleges are less likely to have parents with an earned Bachelor's degree or higher than students attending other sectors of higher education, and are more likely to have parents whose highest level of education was a high school diploma (or less).

Figure 7. Distribution of beginning postsecondary students by parents' highest level of education, by institution type/sector, 2003

	TYPE OF INSTITUTION TOTAL	HIGH SCHOOL OR LESS 36%	SOME COLLEGE 25%	BA OR HIGHER 39%
4-Year	Career Colleges	53%	25%	22%
	Private, Not-for-Profit	18%	21%	61%
	Public	22%	23%	56%
2-Year	Career Colleges	55%	28%	18%
	Private, Not-for-Profit	55%	21%	25%
	Public	42%	29%	29%
<2-Year	Career Colleges	65%	21%	15%
	Private, Not-for-Profit	60%	10%	30%
	Public	67%	19%	14%

SOURCE: EPI Analysis using the Beginning Postsecondary Students Longitudinal Survey Data Analysis System (BPS: 96/01; BPS: 04/06) (DAS), U.S. Department of Education, National Center for Education Statistics.

FIGURE 7 illustrates the educational legacy of students by institution type and sector. While onethird of the total number of higher education students have parents whose highest level of education was a high school diploma, at least half of students attending career colleges have similar educational legacy. For instance, 55 percent of two-year and 54 percent of four-year career college students had no higher education legacy, and 65 percent of less-than-two-year students had parents with only a high school diploma (or less).

Overall, 39 percent of 2003-beginning postsecondary students had a parent with a BA or higher. However, career college students have much lower percentages of parents with a BA degree. Over half of students attending public and private, not-for-profit four-year institutions have a parent with a BA. Comparatively, only 22 percent of career college students had the same educational legacy. At the two-year level, 29 percent of public and 25 percent of private, not-for-profit students had a parent with a BA, compared to 18 percent of career college students. And at the less-thantwo-year level, while 30 percent of students at private, not-for-profit institutions had a BA legacy, only 14 percent of public and 15 percent of career college students had the same.

First Generation and Low Income Students.

First-generation students are more likely to be from low income backgrounds, which, in combination, can make persistence and success more difficult. As with all risk factors, it is often the combination of factors that produce more challenges to educational and career success. As illustrated in FIGURE 8, one quarter of all postsecondary students are both first generation and low income status. Together, 63 percent of 2003beginning postsecondary students are first generation students, and 31 percent are considered low income. Only one-third (32 percent) of students are neither low income nor first generation.

By sector, career college students are much more likely to have both low income and first generation status. At the four-year level, 44 percent of career college students carry both statuses, compared to only 12 percent of public and 11 percent of private, fouryear students. At the two-year level, 50 percent of career college students were both low income and first generation, slightly more than the 45 percent of students attending private institutions and double that of those attending public, two-year institutions (26 percent). Finally, at the less-than-two-year level, 60 percent of career college students were both low income and first generation, compared to 57 percent of private institutions and 47 percent of public institutions.

Examining this data from a different perspective, only a small fraction of career college students – one in 10 - are neither low income nor first generation status. At the four-year level, only 12 percent of four-year

Figure 8.

First generation and low income status for beginning postsecondary students, by institution type/sector, 2003

	TYPE OF INSTITUTION TOTAL	LOW INCOME & FIRST GEN. 25%	LOW INCOME ONLY 6%	FIRST GEN. ONLY 38%	NOT LOW INCOME & NOT FIRST GEN. 32%
4-Year	Career Colleges	44%	9%	35%	12%
	Private, Not-for-Profit	11%	6%	28%	55%
	Public	12%	5%	33%	50%
2-Year	Career Colleges	50%	8%	33%	9%
	Private, Not-for-Profit	45%	8%	31%	16%
	Public	26%	6%	46%	23%
<2-Year	Career Colleges	60%	8%	26%	6%
	Private, Not-for-Profit	57%	15%	15%	13%
	Public	47%	5%	39%	9%

SOURCE: EPI Analysis using the Beginning Postsecondary Students Longitudinal Survey Data Analysis System (2003-04) (DAS), U.S. Department of Education, National Center for Education Statistics.

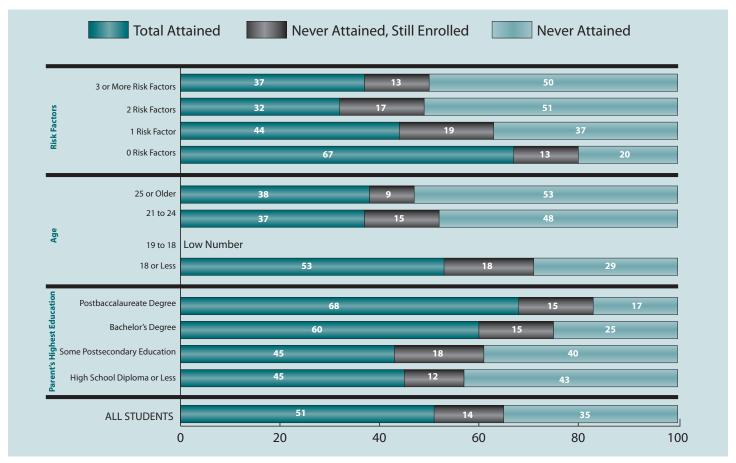
career college students have neither of these risk factors, compared to 50 percent of public students and 55 percent of private students. At the two-year level, only 9 percent of career college students have neither of these risk factors, compared to 23 percent of public and 16 percent of private students. Students at the less-than-two-year level, regardless of institution level or type, are the least likely to have educational legacy and affluence. At this level, only 6 percent of career college students, 9 percent of public students, and 13 percent of private students were both above low income status and not first generation.

WHAT DOES THIS ALL MEAN?

This section illustrates the barriers facing many career college students with respect to educational success. To summarize, FIGURE 9 illustrates that students

who have more risk factors, are older, and have parents with limited or no college education, are far less likely to attain any college degree than other students. As this section also illustrates, students attending career colleges are more likely to have these attributes. Career college students, regardless of level and with almost no exception, are much more likely than students attending other types of institutions to be older, of color, poor, and come from a family that has no educational legacy. Each of these factors is related to lower access and persistence in higher education. However, we also know that career college students are more likely to have several of these attributes in play at one time, which confounds the challenge to career colleges and public policy.

Figure 9. Graduation and persistence rates of 1995-96 beginning postsecondary students by 2000-01, by risk factors, age, and educational legacy



SOURCE: EPI Analysis using the Beginning Postsecondary Students Longitudinal Survey Data Analysis System (BPS:04/06) (DAS), U.S. Department of Education, National Center for Education Statistics.

Student Persistence and Attainment

rom a student and institutional point of view, success can be achieved in a variety of ways. From the student perspective, one can imagine the attainment of personal, academic and career goals. From an institutional perspective, goals typically include basic student outcomes such as retention and graduation rates, although there are other outcomes that simultaneously matter. This section focuses on the academic outcomes of students in higher education.

STUDENT RETENTION

Student retention typically refers to the ability of students to persist from one fall to the next fall. It can sometimes be used to discuss retention from semester to semester, but federal and other datasets focus primarily on the fall-to-fall retention – or persistence – of students as a major indicator of academic progress.

FIGURE 10 illustrates the fall-to-fall retention rates of full- and part-time students by institutional type and sector. On average, slightly more than two-thirds (69 percent) of all first-time, full-time students who entered higher education in fall 2005 returned to higher education one year later. For part-time students, about half of entering students (53 percent) returned.

As expected, these retention rates vary significantly by institution type. At the four-year level, public and private institutions retain 72 and 73 percent of students the following year, compared to 56 percent of career college students. The part-time retention rate at the four-year level shows a smaller difference, ranging from 43 percent for career colleges to 50 for public and 56 percent for private institutions.

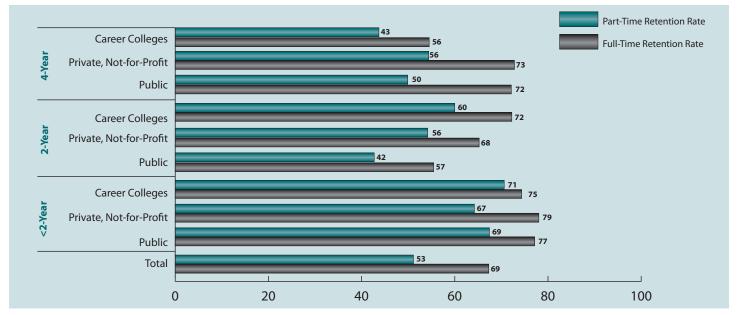
At the two-year level, career colleges have higher full-time and part-time retention rates than other sectors. For instance, 72 percent of two-year career college students return one year later, compared to 57 percent of those at two-year public institutions and 68 percent at private, not-for-profit institutions. Part-time students at the two-year level mirror the full-time retention rates, but at a reduction of 12 and 15 percent.

At the less-than-two-year level, the retention rate of students at career colleges, public institutions and private institutions are very similar. Three quarters of full-time career college students are retained to the following year, as are 71 percent of part-time students. The gap between part-time and full-time students is much smaller in this category due to the fact that most programs are about a year in length.

GRADUATION RATES

Of course, retention rates only provide an indicator to the future. A more comprehensive measure of postsecondary success is whether students complete their programs.

Figure 10. Fall-to-fall retention rates of full-time and part-time undergraduate students, by institution type/sector, 2006



SOURCE: EPI Analysis using the Integrated Postsecondary Education Data System (IPEDS) Data Analysis System (DAS), 2006, U.S. Department of Education, National Center for Education Statistics.

As illustrated in FIGURE 11, 51 percent of entering postsecondary students attained some academic credential within six years of matriculation, either in the form of a degree, diploma or certificate. Alternatively, one-third (35 percent) of all entering students did not attain a credential within that period of time. An additional 14 percent of students had not earned a credential but were still enrolled.

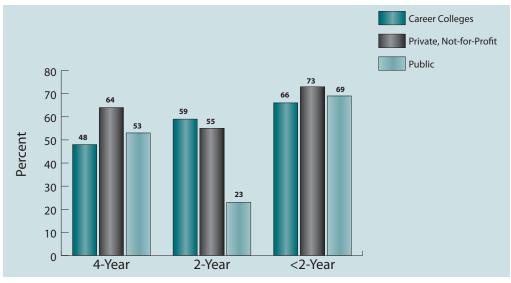
Students attending four-year institutions had the highest attainment rates among the sectors. Slightly more than half (53 percent) of career college students attained a degree of some type within six years of matriculation, compared to 73 percent and 60 percent of private, not-for-profit and public students, respectively. It is important to note that four-year institutions may also offer Associate degrees and

Figure 11. Highest degree attainment for 1995-96 beginning postsecondary students by 2001, by institution type /sector

	TYPE OF INSTITUTION TOTAL	NEVER ATTAINED 49%	ATTAINED 51%	CERTIFICATE 12%	ASSOCIATES 10%	BACHELOR'S 29%
4-Year	Career Colleges	47%	53%	19%	15%	20%
	Private, Not-for-Profit	27%	73%	2%	3%	69%
	Public	40%	60%	3%	4%	53%
2-Year	Career Colleges	45%	55%	29%	25%	2%
	Private, Not-for-Profit	42%	58%	20%	27%	12%
	Public	62%	36%	10%	16%	10%
<2-Year	Career Colleges	36%	64%	63%	1%	0%
	Private, Not-for-Profit	low #	low #	low #	low #	low #
	Public	44%	56%	54%	3%	0%

SOURCE: EPI Analysis using the Beginning Postsecondary Students Longitudinal Survey Data Analysis System (2003-04) (DAS), U.S. Department of Education, National Center for Education Statistics.

Figure 12.
Graduation rates of undergraduate students (150 percent of the normal time), by institution type/sector, 2006



SOURCE: EPI Analysis using the Integrated Postsecondary Education Data System (IPEDS) Data Analysis System (DAS), 2006, U.S. Department of Education, National Center for Education Statistics.

certificate programs, which are particularly common in the career college sector. That is, the relatively high proportion of students attaining alternate credentials in the career college sector as shown in FIGURE 11 most likely results from the fact that students attending these institutions are pursuing these alternative degrees. This is particularly likely in institutions that have recently moved to four-year degree status.

At the two-year level, career colleges had a 55 percent attainment rate within 6 years, compared to 36 percent for public two-year and 58 percent at private, not-for-profit institutions. Two of three students (64 percent) attending less-than-two-year career colleges earned credentials, compared with 56 percent of students at public institutions.

FIGURE 12 illustrates the graduation rates of students within 150 percent of scheduled graduation time. That is, within six years for four-year students, three years for two-year students, and two years for less-than-two-year students. This is the benchmark used by the U.S. Department of Education for analytical purposes.

As the figure illustrates, the graduation rates vary greatly, but perhaps not as much in some areas as might be expected. At the four-year level, private institutions have the highest rate (64 percent), which is not

surprising given the admissions selectivity of many of the institutions in that sector. Public institutions, many of which are also selective, graduate 53 percent of their students, and career colleges graduate 48 percent of students.

At the two-year level, career colleges have the highest graduation rate – 59 percent – compared to only 23 percent of students attending two-year public institutions. Private two-year institutions graduate 55 percent of their students.

The graduation rates of less-than-two-year institutions were within a relatively small range. Career colleges graduated 66 percent of students, compared to 69 percent of public, and 73 percent of private, not-for-profit institutions.

Graduation Rates by Income

Career colleges serve a higher percentage of low income students than other sectors. Thus, we conducted a cross-analysis of graduation rates using income as a defining variable. This is a particular challenge in the IPEDS dataset, given that no such variable exists. Therefore, we created a proxy using the percentage of students who receive federal grant aid, by institution,

with the rationale that, because federal grant aid is almost entirely need-based, it establishes a low income measure by definition.

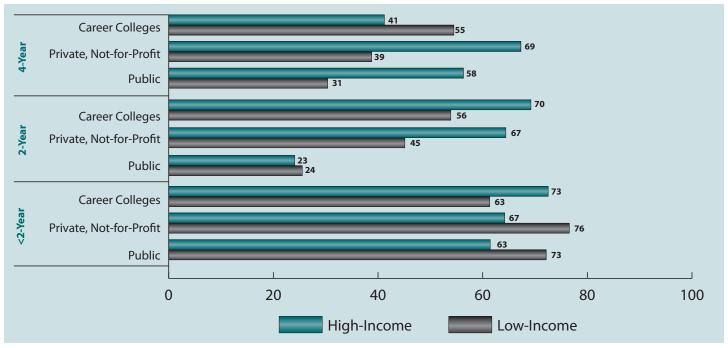
FIGURE 13 illustrates the graduation rates of students at institutions using our income proxy. For the purpose of this analysis, we considered a high rate of low income students to be at least 60 percent. Career colleges do a remarkably good job of graduating low income students compared to public institutions. For this discussion, we will title institutions serving a high percentage of Pell-elgible students "lower income" schools and those serving a low percentage of Pell-eligible students "affluent" schools.

At the four-year level, it appears that career colleges serving a high percentage of low income students do a much better job at graduating students than private and public institutions within that category. Fifty-five percent of students at low income career colleges graduate within six years compared to 31 percent of those attending more affluent public institutions – a

gap of 24 percent. Thirty-nine percent of students at the similar private institutions graduated. Affluent public and private institutions graduate a higher percentage of students than affluent career colleges, which could reflect other risk factors that are found in greater numbers among career college students. Affluent public institutions graduated 58 percent of students, and private institutions 69 percent, compared with 41 percent at career colleges. Put another way, four-year career colleges that serve a high percentage of low income students have about the same graduation rate as public four-year institutions serving a more affluent student body (55 versus 58). Thus, while public institutions appear to have a challenge dealing with low income/at-risk populations, career colleges appear to excel with this population.

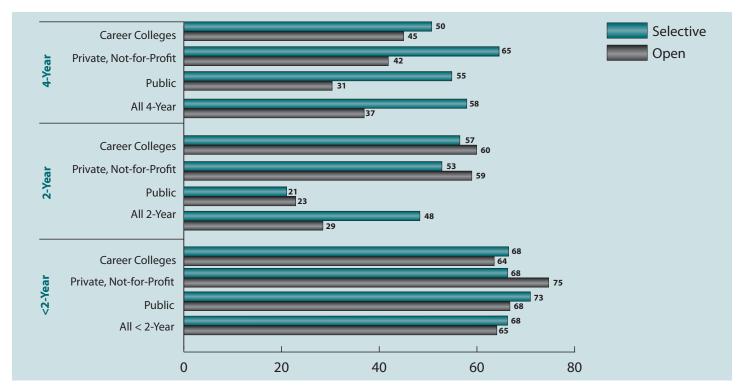
Students who attend two-year, lower income career colleges graduate at a rate of 56 percent compared to 24 and 45 percent at equivalent public and private institutions, respectively. Thus, career colleges that serve a high percentage of low income students have

Figure 13. Graduate rates of students attending institutions that serve predominately low income students versus institutions that serve predominately high income students, by institution type/sector, 2006



SOURCE: EPI Analysis using the Integrated Postsecondary Education Data System (IPEDS) Data Analysis System (DAS), 2006, U.S. Department of Education, National Center for Education Statistics.

Figure 14.Cohort graduation rates (150 percent of normal time) by institution, by institution type/sector/selectivity, 2006



SOURCE: EPI Analysis using the Integrated Postsecondary Education Data System (IPEDS) Data Analysis System (DAS), 2006, U.S. Department of Education, National Center for Education Statistics.

twice the graduation rate of similar public two-year institutions.

At lower income less-than-two-year institutions, 63 percent of career college students graduate, compared to 73 percent of public and 76 percent of private institutions.

Graduation by Institutional Selectivity

As a secondary analysis, we focused on open admissions institutions versus selective institutions. Within the IPEDS dataset, institutions designate whether they are open admissions institutions or selective institutions. We used this as our variable for analysis, although it is important to note that selective private, not-for-profit and public institutions likely have a higher degree of selectivity than career colleges.

FIGURE 14 illustrates that four-year selective institutions had a much higher graduation rate than

open admissions institutions, by a margin of 21 percent (58 vs. 37 percent). There was only a modest difference in outcomes by admissions selectivity at career colleges (50 vs. 45 percent), which could be due to a smaller range of selectivity within career colleges compared to other sectors. Selective public four-year institutions had a graduation rate of 55 percent compared to 31 percent for open admissions institutions. Of interest is that the graduation rate at non-selective four-year career colleges (45 percent) was higher than that at non-selective private (42 percent) and public (31 percent) colleges.

Approximately half (48 percent) of students who attend a selective two-year institution graduate within three years (or 150 percent of normal time). This is a substantial increase over open admissions institutions, where the graduation rate is only 29 percent. Again, comparing career colleges with public institutions with similar levels of selectivity shows that career colleges

have much higher graduation rates. Within the lessthan-two-year sector, the variations by selectivity are marginal.

Graduation Rates by Race/Ethnicity

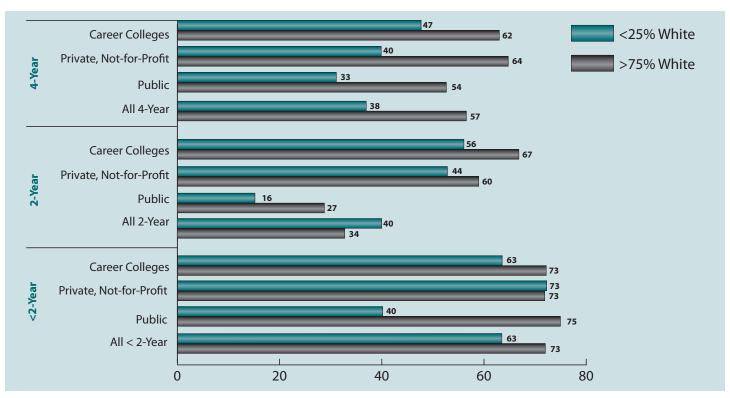
FIGURE 15 illustrates the variation in graduation rates by the diversity of institutions by their ratio of race/ethnic groups. For our analysis, we used a ratio of white to non-white students. Specifically, we focused on institutions with less than 25 percent white students versus those with over 75 percent white students as our measure of diversity.

Typically, institutions with less diverse student bodies have higher graduation rates than those that are more diverse. This is certainly true at the four-year level, where 57 percent of students at predominantly white institutions graduate compared to only 38 percent at predominantly minority institutions. This also holds

true at less-than-two-year institutions, where the graduation rates are 73 and 63 percent for predominantly white versus predominantly minority institutions. Alternatively, predominantly minority two-year institutions have a higher graduation rate (40 percent) than those that are predominantly white (34) percent).

Within the four-year sector, career colleges that are predominantly minority-serving have a much higher graduation rate than public and private institutions that also serve predominantly minority students (47 percent versus 33 percent and 40 percent, respectively). At the two-year level, career colleges again have the highest graduation rate within the predominantly minority institutions (56 percent), compared to public (16 percent) and private (44 percent) institutions. Career colleges also have the highest graduation rate at two-year predominantly white institutions, with a 67 percent graduation rate

Figure 15. Cohort graduation rates (150 percent of normal time) by institution level and institutional race/ethnic ratio, 2006



SOURCE: EPI Analysis using the Integrated Postsecondary Education Data System (IPEDS) Data Analysis System (DAS), 2006, U.S. Department of Education, National Center for Education Statistics.

compared to 27 percent at public institutions and 60 percent at private institutions.

Finally, at the less-than-two-year level, private institutions have the highest graduation rate at predominantly minority institutions (73 percent), while career colleges graduate 63 percent and public institutions 40 percent of their students. At the predominantly white institutions, each sector graduates approximately three quarters of incoming students.

We conducted a second analysis with the race/ethnic variables in IPEDS (FIGURE 16). Due to smaller cell sizes, we were not able to analyze less-than-two-year schools. Overall, Asian/Pacific Islanders have the highest graduation rate (57 percent), followed by white students (50 percent), Hispanics (48 percent) and African-American students (41 percent). With only one exception, private, not-for-profit institutions had a higher graduation rate among all ethnic groups than other sectors, followed by career colleges. Public institutions had the lowest graduation rates for any race/ethnic group, regardless of institutional level. Also of interest is that career colleges graduate African-American and Hispanic students at higher rates than public institutions graduate white students.

Fifty percent of African-American students at four-year private, not-for-profit institutions graduate within 150 percent of normal time. This compares to 45 percent at career colleges and 38 percent at public institutions. Private, not-for-profit institutions also graduate 57 percent of Hispanic students, compared to 54 percent at career colleges and 42 percent at public institutions.

At the two-year level, similar patterns are evident. Private, not-for-profit institutions graduate 59 percent of their African-American students and 63 percent of their Hispanic students. Career colleges, by comparison, graduate 54 and 63 percent of those students, respectively, with public two-year institutions graduating 23 and 30 percent of African-American and Hispanic students.

Given that private, not-for-profit institutions are generally more selective and attract the best and brightest from around the country and beyond, it bodes well that career colleges compare well in minority graduation rates to the private, not-for-profit sector and far exceed the graduation rates at public institutions.

Figure 16.
Graduation rates of postsecondary education students, 2006

	TYPE OF INSTITUTION TOTAL	WHITE, NON- HISPANIC 50%	BLACK, NON- HISPANIC 41%	HISPANIC 48%	ASIAN OR PACIFIC ISLANDER 57%
4-Year	Career Colleges	50%	45%	54%	62%
	Private, Not-for-Profit	58%	50%	57%	65%
	Public	46%	38%	42%	49%
	All 4-Year	54%	46%	52%	59%
2-Year	Career Colleges	62%	54%	63%	75%
	Private, Not-for-Profit	69%	59%	63%	69%
	Public	31%	23%	30%	38%
	All 2-Year	46%	37%	44%	53%

SOURCE: EPI Analysis using the Beginning Postsecondary Students Longitudinal Survey Data Analysis System (2003-04) (DAS), U.S. Department of Education, National Center for Education Statistics.

NOTE: Cell sizes for less-than-two-year institutions were too low for analysis; graduation rates are calculated using 150 percent of regular graduation time (e.g., six-year rates for four-year institutions, three years for two-year institutions). This analysis uses a 2000-entering cohort for four-year and 2003-entering cohort for two-year calculations. There were not enough data points to calculate graduation rates by race/ethnicity at the less-than-two-year level.

Conclusions

his report clearly establishes the fact that career colleges function as an important component of our nation's higher education system. Statistically, not only do students attending career colleges perform as well as or better than many other students attending comparative public institutions, but they persist in and complete their education while typically being more economically, educationally and socially challenged than other students.

Of the data we analyzed from 6,750 institutions in the IPEDS system, 40 percent are career colleges. As we learned, students attending these career colleges are more likely to be older, of color, and come from a low income background than students in other institutional sectors. They tend to have more risk factors, such as having dependent children, or being single with dependent children, than students in other sectors. All of this makes the path toward and through higher education more challenging for this demographic. Students attend career colleges for a variety of reasons, including the ability to get in and get out quicker than in other sectors, but perhaps also because these institutions meet their needs and challenges better than other institutions.

In examining how well career colleges serve their students, our analysis found that full-time students were retained at rates that exceeded part-time students, and that career colleges had higher retention rates at

the two-year level than public and private institutions, while the latter had higher rates at the four-year level. At the less-than-two-year level, the rates were similar across all sectors, albeit the gap between full- and parttime was smaller at career colleges than other sectors.

We found that half of all students who enter college graduate with some degree, with higher percentages at the four-year and less-than-two-year schools, and lower rates at the two-year level. While career colleges had slightly lower graduation rates at the four-year level, they had the highest rates at the two-year level and were on par at the less-than-two-year level with public and private institutions.

We also looked at income as a variable, finding that career colleges tend to serve more students from lower income backgrounds, and serve them better, as denoted by higher graduation rates. The fact that career colleges serving a high percentage of low income students have almost twice the graduation rate as public institutions at the two- and four-year levels makes a statement about the commitment these schools have to these students and the role they play in the higher education system.

Our review of graduation rates by race/ethnic group found similar conclusions. Career colleges do a better job of graduating minority students than public institutions at both the two- and four-year levels.

Insights derived from statistical analysis of outcomes don't represent the entire story of career college student success. In transcending barriers, why and how do these students respond to the career college environment? Is it partially the effect of student-faculty interaction and mentoring, or the effort of career colleges to address learning style models in their curricula? Are career colleges perceived as easier to access and more supportive in offering practical opportunities for adult students to succeed in post-secondary education? These are questions that remain to be answered.

By understanding how career college students make their way through higher education, especially in relationship to other sectors, we can set the stage for closer examination of what strategies seem to work better for certain students in the career college arena. As with all sectors, we strive to find strategic ways to increase access, retention and graduation rates of students across all categories. To do that, we'll have to keep a firm understanding of statistics as in this report, but move forward in identifying and communicating best practices in areas such as enrollment management, teaching and learning, financial aid, and student services.

Meanwhile, it is incumbent upon career colleges to continue to serve students who are historically underrepresented in higher education. In achieving our national goal to raise the level of educational attainment for all Americans, career colleges play a vital role in adding value to individuals, families, employers and society as a whole. To remain globally competitive in the 21st century, our workforce must be both trained and revitalized, and on this front, career colleges continue to prove their worth and substance in human terms.

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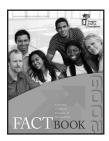
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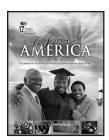
The *Economic Impact of America's Career Colleges* is the first comprehensive study completed of the economic impact of the career college sector. This study estimates that career colleges generate \$38.6 billion in annual economic impact. This total includes \$14.6 billion in direct institutional impact, \$4 billion in related student fees and expenses, \$3.5 billion in higher career college graduate starting salaries and other benefits, and \$16.5 billion in indirect economic activity associated with the industries in which the graduates are employed.



The *Fact Book* contains research and analysis of important trends in the career college sector of higher education. It presents a comprehensive look at the for-profit and career college sector of higher education, as well as a comparison of public and private two- and four-year institutions. It also contains research and analysis of important trends in the career college sector, data on enrollment, student benefits and outcomes, career college student profiles, default rates, return on investment statistics, and job opportunities for graduates.



Filling America's Skilled Worker Shortage: The Role of Career Colleges presents a comprehensive review of the U.S. labor force skills shortage by industry, and the role of career colleges in meeting the high demand for industries such as business and management, computers and communication, education, healthcare, legal and personnel, and culinary.



In Service to America: Celebrating 165 Years of Career and Professional Education tells the history of the growth of the career college sector in the United States from 1841 to the present, as reflected through the development of its representative associations. While principally a story about the dynamic internal evolution of the associations, this book also reveals the phenomenal history of institutions that have grown dramatically and continue to provide necessary educational services to our nation and its economy.

ROI of Faculty Development: A Case Study Conducted by the ROI Institute illustrates that results-based faculty development programs can produce a significant positive ROI for an institution. After isolating the effects of the program the result was a positive ROI of 517% for the CEE Faculty Development Program. The conclusions from the evaluation study reflect that the CEE Faculty Development Program was a positive investment for UTI's Mooresville campus.

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