



MOBILITY MAKERS

Community colleges have become key springboards for income mobility in today's knowledge economy, but too many of those enrolled drop out before graduating—raising the graduation rate will provide a huge lift to students, employers and the economy

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MOBILITY MAKERS

Community colleges have long been the overlooked stepchildren of the educational system. But because of profound structural changes in the U.S. economy over the past several years, community colleges have become increasingly critical to the nation's economic competitiveness and the key platform for moving low-income people into the middle class.

Since the start of the Great Recession in late 2007, young people have flocked to community colleges in record numbers. In New York City, the City University of New York's (CUNY) two-year institutions have 43 percent more students than a decade ago. Much of the increase has occurred in the last few years, signifying that a postsecondary credential is now seen as the bare minimum for accessing decent-paying jobs.

Unfortunately, community colleges are not yet delivering on all their potential. Far too few people who enroll at community colleges, both in New York City and across the country, end up graduating or moving on to earn a bachelor's degree. In New York City, 28 percent of community college students graduate with an associate's or bachelor's degree within six years of enrolling. The national average for community college graduation after six years is even lower, at 26 percent.¹

There are understandable reasons why graduation rates have been low. To begin with, community colleges are open access institutions, and they accept whoever applies. A significant number of the students already face steep hurdles when they enter. For instance, of those who arrive at a CUNY community college from a public high school, four out of five must take at least one remedial class. Three in ten are working more than 20 hours per week to earn a living. On top of this, community colleges receive less than half the funding per student received by four-year colleges and universities, and state funding of the CUNY community college system has dropped by more than one-quarter over the past decade.

Nevertheless, community colleges could and should be doing much better. As we show in this report, low graduation rates exact steep costs to individuals, businesses, the economy and taxpayers. Increasing the number of community college students who graduate will not only make it easier for employers to find qualified workers, it will dramatically raise the employment prospects of graduates and put them on a career track with significantly higher earning potential. And, of course, with higher earnings comes more spending in the local economy, higher tax receipts and more effective public investments in the form of operating aid and grants.

We estimate that increasing graduation rates at New York City's six community colleges by just 10 percentage points for the class that entered in 2009 would provide a \$71 million one-year boost to the city and state: a \$16 million boost in annual earnings (of which \$2.1 million would go to the city and state in tax revenues), \$28.5 million in economic activity as higher-earning college graduates spend their income in their neighborhoods, and \$26.5 million in taxpayer investment going towards college graduates instead of college dropouts. Over a decade, the combined income, economic activity and public-investment value to New York City and New York State of raising the graduation rate by 10 percentage points would be roughly \$689 million; over two decades, \$1.4 billion; over a three-decade career, \$2.1 billion.

Increasing the graduation rate permanently would have powerful long-term value for the city's economy.

This report aims to document why raising the rate at which individuals are graduating from community colleges in New York City—and getting more from the public’s already significant investment in community colleges—is of critical importance from a fiscal, economic and social perspective. The study, which is supported by the IBM International Foundation, details the cost of high community college drop-out rates and the return on investment that would result from raising graduation rates even by a small amount.

The abysmal rate at which individuals graduate from community colleges is a national problem, and it is particularly bad in large urban areas where a substantial share of the students enrolled are from disadvantaged backgrounds who attend poorly performing public school systems. None of the five most populous cities in the United States have higher than a 20 percent four-year graduation rate among their community colleges—Los Angeles has the highest (with a 20 percent graduation rate), followed by New York City (19 percent), Philadelphia (14 percent), Houston (14 percent) and Chicago (10 percent).² (We use four-year graduation rates here because it was the only readily available data set for all major U.S. cities. Elsewhere in the study, we use six-year graduation rates, which were available for New York City and the nation and which we believe present a more accurate portrait of graduation patterns at these institutions.)

We chose to focus this report on community colleges in New York City, not because the graduation rates in New York are lower than elsewhere—on the contrary, they are higher than three of the other four largest cities in the U.S.—but because New York has the nation’s largest system of urban community colleges in the United States. The challenges and opportunities here offer a useful window on what is at stake in the fate of two-year public colleges across the country.

The six CUNY community colleges—Kingsborough, Borough of Manhattan, Queensborough, LaGuardia, Bronx and Hostos—have a collective enrollment of more than 91,000 students, of whom roughly 82,000 seek to earn an associate’s degree or to prepare for transfer to a comprehensive college for pursuit of a bachelor’s degree.³

Currently, too few of these students are coming away with a degree. Of the 10,185 students who started at CUNY community colleges in 2004, a staggering 63 percent dropped out within six years, 28 percent earned a CUNY degree—20 percent received an associate’s degree and 8 percent a bachelor’s degree—and 9 percent were still enrolled.⁴

As we show in this report, improving upon these lackluster numbers would have clear benefits for students, businesses, the broader New York economy and taxpayers.

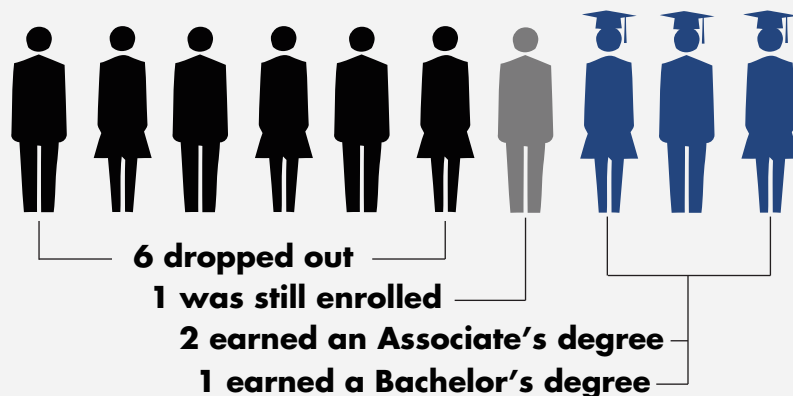
Both nationally and in New York City, people with college credentials are much more likely to be employed than those with only a high school diploma or some college. The employment participation rate (that is, the share of employed adults) for New York City residents with an associate’s degree is 68 percent; in contrast, only about half of all city residents with a high school diploma or a year of college are employed at any given time.⁵ In 2010, during the peak of the Great Recession, the unemployment rate for those with an associate’s degree was just 7 percent, compared to a 14.9 percent jobless rate for those with less than a high school degree, 10.3 percent for individuals with only a high school diploma or GED and 9.2 percent for people who have completed some college (but who have not achieved an associate’s degree).⁶ New Yorkers with higher levels of educational attainment fared even better; the unemployment rate was 5.4 percent for individuals with a bachelor’s degree and 2.4 percent for those with a professional degree.⁷

Individuals with at least an associate’s degree are also likely to earn a lot more. According to a recent study, workers with an associate’s degree earn, on average, 30 percent more over the course of their career than workers with a high school degree only, while workers with a bachelor’s degree earn over 75 percent more over the course of their career.⁸

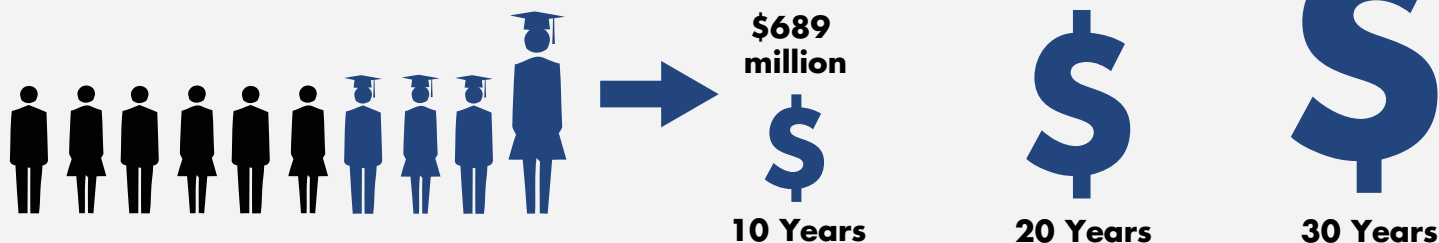
Our analysis of Census data finds that average annual earnings for a high school graduate in New York City, ages 25-29, are about \$17,000, and a year of college without a degree will bump average income to \$22,000.⁹ But an adult with an associate’s degree earns \$29,000 on average. As a result, someone who attends college for a year and drops out is giving up an average of \$7,000

KEY FINDINGS

For every **10 students** who entered CUNY community colleges in 2004, **six years later:**



The value to the NYC and NYS economies of raising the graduation rate by 10 percentage points:



Increasing graduation rates at NYC's six community colleges by just 10 percentage points would provide a **\$71 million** one-year boost to the city and state economies

\$16m

boost in annual earnings (\$2.1m would go to city and state in tax revenues)

\$28.5m

in economic activity as higher-earning college graduates spend their income in their neighborhoods

\$26.5m

in taxpayer investment going towards college graduates instead of college dropouts

Average Annual Earnings, Age 25-29

\$17k

High School Diploma

\$22k

Some College

\$29k

Associate's Degree

\$42k

Bachelor's Degree

2010 Unemployment Rate

14.9%

Less than a high school diploma

10.3%

High school diploma or GED

9.2%

Some college, no degree

7%

Associate's degree

5.4%

Bachelor's degree

2.4%

Professional degree

Of the Five Largest U.S. cities

0

have 4-year community college graduation rates over 20%

CUNY ASAP vs Other

27.5%

2-year graduation rate of students in CUNY ASAP program

7.5%

2-year graduation rate of other comparable students

in annual earnings by not completing their associate's degree. Also, more than one in four CUNY community college students who graduate within six years does so with a bachelor's degree. Even as young adults in their late 20s, they earn an average of more than \$40,000 in New York City, an even greater advantage over high school graduates and those who complete only some college without getting a degree. "People sometimes ask: 'should everybody get a college degree?'" notes Thomas Bailey, director of the Community College Research Center at Teachers College and a national expert on community college completion. "No, but it's fairly clear that the economic returns to education over a lifetime are way above the costs."¹⁰

In addition to forgoing the additional earning power that an associate's degree would bring, college dropouts are more likely to default on their student loans. Though the numbers are relatively low compared to private four-year or for-profit institutions, about nine percent of CUNY community college students take out federal loans, at an average of \$3,000 per loan. And one out of nine defaults within three years.

Improving community college graduation rates will also help ensure that New York-based businesses in many of the fastest growing industries have the skilled employees they need to compete. In researching this report, we interviewed more than two dozen New York-based employers and industry leaders in occupations such as health care, transportation, auto maintenance and construction—fields that tend to pay middle-income salaries and which have long hired employees with relatively low levels of educational attainment. Almost all of them told us that they are increasingly looking to hire college graduates. The employers we interviewed did not always make a sharp distinction between an associate's and bachelor's degree, but they clearly expressed that the future belongs to those with a solid postsecondary education and credential.

"It's even helpful for building supers to have at least a community college degree today," says Eugene Schneur, managing director of Omni New York, a company that rehabs and maintains affordable housing across the five boroughs. "As technology evolves with boilers and energy

saving equipment in buildings, supers need to be computer literate to run them properly."

"There's going to be a big shift toward middle-skill jobs in health care, and I definitely think community college graduates are going to be important in that shift," adds Bill Stackhouse, director of workforce development at the Community Health Care Association of New York State.

Several employers we interviewed say that finding employees with the skills they need is often a challenge, even in a sluggish economy when so many people are out of work. But matching skills to open positions will undoubtedly become a much bigger hurdle for local businesses when the economy finally heats up, especially since many key middle skill occupations—from cable installers and nurses to auto maintenance technicians and pest control workers—employ large numbers of baby boomers who are expected to retire in the next decade. In fact, the share of jobs requiring education beyond high school more than doubled between 1973 and 2008, from 28 percent to 59 percent, according to Anthony Carnevale, director of the Georgetown University Center on Education and the Workforce. Carnevale's research estimates that by 2018, 63 percent of jobs nationwide will require some form of postsecondary degree.

As we detail in this report, there are also significant public costs to the high community college dropout rate. CUNY's community colleges receive most of their public funding through a mix of city and state operating aid, tuition assistance from the state and federal Pell grants. At present, the majority of these public funds subsidize college students who do not graduate.¹¹

Overall, we estimate that the combined public cost for each community college dropout in New York City is roughly \$17,783. This breaks down as follows:

- Community colleges in the city received \$8,719 in base operating aid from New York State and New York City for each student who later dropped out.
- Community college students received roughly \$6,245 in federal Pell grants before dropping out.

- Community college students in New York received about \$2,819 in aid from the state-funded Tuition Assistance Program (TAP) before dropping out.

There are other significant costs to New York City from the high dropout rate at the city's community colleges. For instance:

- The income lost to a single cohort of students entering CUNY in 2004 in one year was approximately \$86 million (of which \$19 million consisted of lost tax receipts).
- The one-year cost in terms of lost economic activity is \$153 million.
- Over a decade, the income and economic activity lost to the city from the large number of dropouts in the 2004 cohort rises to \$2.4 billion, and over a 30-year career approximately \$7.2 billion.

Clearly, there is a powerful economic argument for increasing the number of students who graduate from community colleges in New York. In fact, we found that even a small increase in New York's community college graduate rates would have massive benefits, not only for individuals and employers, but for taxpayers and the city's economy.

We calculated the value of increasing community college graduates rates in New York City by just 10 percentage points, from 28 percent to 38 percent, for the group of students who entered CUNY community colleges in fall 2004. This modest graduation rate increase:

- Would have enabled the city, state and federal governments to spend at least \$18.1 million on college graduates instead of college dropouts.
- Would have added \$30 million per year to the city economy in income and economic activity, even after discounting for the graduates who leave the city for other opportunities.

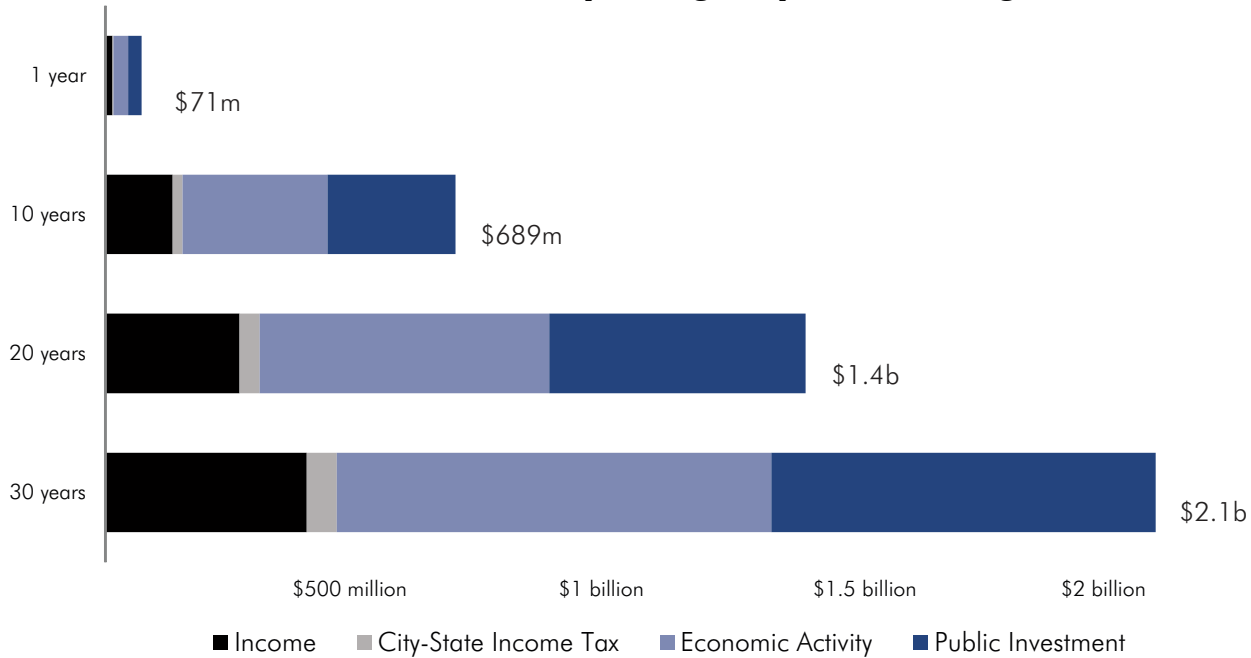
- Would have brought in \$2.7 million in additional tax receipts for one year.

These calculations are based on increasing graduation rates from the cohort of students who entered CUNY community colleges in 2004. But looking ahead to the 2009 cohort, which has 50 percent more students enrolled than the 2004 group, one can readily see the immense economic benefit of increasing graduation rates. Raising the six year graduation rate at CUNY community colleges by 10 percentage points will increase the one-year earnings of the 2009 cohort by \$16 million, and one year tax receipts by at least \$3.9 million. Moreover, because earnings gained are spent at the grocery store, clothing store, and other fixtures of the local economy, the extra economic activity spurred by the one-year increase in income would add up to \$28.5 million, a sum that would, in turn, lead to additional tax receipts for the city, state and federal governments. Finally, public investment worth more than \$26 million in operational aid, Pell and TAP grants would be spent as intended—on college graduates.

Furthermore, all these savings compound over time. Over a 10-year period, the combined income, economic activity and public-investment value to New York City and New York State of raising the graduation rate by 10 percentage points would be roughly \$689 million; over two decades, \$1.4 billion; over a three-decade career, \$2.1 billion. See Chart 1.

It is tempting to regard the low graduation rates as a failure of the individual institutions, the teachers, administration or some combination. The reality, however, is that low graduation rates are a chronic problem around the country. They cannot be separated from other dilemmas our nation faces: low high school graduation rates, weak college preparation among those who do obtain their high school diplomas, economic dislocations that drive many adults back to school for retraining, and state and local budgets that lag far behind the fiscal needs of the institutions on the frontlines of postsecondary learning. In New York City, for instance, only a quarter of students who enter a public high school are ready for college after four years; the college readiness rate was actually less than half the graduation rate at 299 of the city's 363 schools.¹²

Chart 1: Value of Raising Graduation Rate of 2009 Freshman Class at CUNY Community Colleges by 10 Percentage Points



Data compiled by the Center for an Urban Future based on the following sources: Income – American Community Survey; City-State Income Tax – New York City Department of Finance and New York State Department of Taxation and Revenue; Economic Activity – Economic Modeling Specialists Inc.; Public Investment – City University of New York, New York State Education Department.

CUNY's community colleges provide a unique service by offering a shot at higher education to New Yorkers who have few other options for postsecondary study. Three-quarters of all entering freshmen test into developmental education courses. According to a survey administered to entering freshmen, almost half are the first individuals in their families to attend college, and almost half live in a family with a household income below \$20,000.

The good news is that CUNY is now aggressively tackling the problem. In the last few years, CUNY leaders have articulated clear graduation rate goals, launched its first new community college in 40 years in a way that could drive systemic reform, implemented several system-wide student success initiatives, and encouraged equally bold reform efforts at several campuses. These new initiatives—including the Accelerated Study in Associate Programs (ASAP), CUNY START, Graduate NYC, the Latino STEM Support Network Early Alert System at Queensborough Community College, and early college high schools like the new Pathways in Technology (P-Tech) Early College High School

in Brooklyn—have already demonstrated that it is possible to move the needle.

In a 2008 interview, Chancellor Matthew Goldstein told us that it is critical for CUNY and other community college systems to graduate more of their students, even while acknowledging legitimate reasons for the low graduation rates. "Many students come in very poorly prepared, so we have to remediate them with work that is not college work. That can take a year or a year and a half. Also, the students are often poor. Many have to work while they are going to school, and that's a serious issue. And they are not well funded, so we can't give a wide spectrum of courses over a wide number of hours during the day. You put all of that stuff together and it adds up. And then there are students who go to community colleges without the intention of getting a degree," says Goldstein. "Those are all legitimate reasons why graduation rates are low. But that is not going to succeed in convincing the market place that these are serious places that deserve investment. If we get graduation rates up, community colleges are going to be viewed in a very different way. So we have to get graduation rates up."

THE CUNY COMMUNITY COLLEGE SYSTEM AND ITS ROLE IN THE NEW YORK ECONOMY

The City University of New York (CUNY) operates the nation's largest urban public higher education system, including the largest system of urban community colleges. The six institutions—Kingsborough, Borough of Manhattan, Queensborough, LaGuardia, Bronx and Hostos—graduate more than 10,000 adults with associate's degrees every year and train thousands more who transfer to senior colleges to complete a bachelor's degree.

Since their establishment between 1957 and 1970, the CUNY community colleges have offered relatively affordable tuition, open access to all applicants and marketable credentials that can be earned in two years or less. These institutions have come to play an important role in giving thousands of the city's low and middle income residents access to higher education. Over the past decade, CUNY's community colleges have become even more central to the city's economy.

This is best demonstrated by the exploding enrollment at CUNY's community colleges. Between 1999 and 2007, the number of degree-seeking students attending these schools increased by 27 percent, from 52,701 to 66,823. But enrollment has swelled even more dramatically over the past three years, jumping by almost one-quarter between 2007 and 2010, when the student population hit a historic high of 82,524.

The rising enrollment at CUNY's community colleges is good news for New York's economy, which benefits when more of the city's residents achieve higher levels of educational attainment. Indeed, economists have found that cities with higher educational attainment levels have seen both their population and regional productivity rise much faster than less well educated cities. Community college graduates also take less time to train for new jobs and tend to be more productive than their counterparts without degrees.

It is also important given that New York's future competitiveness in a number of key industries will depend on getting more New Yorkers two and four year degrees. Too many New Yorkers today simply don't have the educational attainment levels that businesses require. Nearly 1.2 million New York City residents aged 25 and older—more than 21 percent of the total—lack a high school diploma or its equivalent. It is of particular concern that while Hispanics and other non-white residents are expected to drive much of the city's future population growth, these groups tend to have significantly lower rates of educational attainment. Among eighth graders in New York City, only 52 percent of Hispanics and 45 percent of black students scored "at or above Basic" level in math—compared with 77 percent of white students. Reading scores showed a similar pattern: 80 percent of white students scored at or above Basic, compared with 50 percent of blacks and 51 percent of Hispanics.

New York has an economic stake in improving these numbers, and community colleges are arguably the best opportunity to make a difference. Minorities account for 95 percent of students enrolled at LaGuardia Community College, 92 percent at Bronx Community College, 84 percent at Hostos, 78 percent at BMCC, 67 percent at Queensborough and 62 percent at Kingsborough. (See table 1.) About two-thirds of collegegoing graduates of the New York City public school system attend CUNY institutions.

The rising enrollment at these institutions is also important since the city's community colleges have become essential mechanisms for elevating New Yorkers into the middle class. Indeed, as the shift to a globally competitive knowledge economy has accelerated over the past decade, educational attainment has become the driving force behind economic prosperity and the key determinant of individual economic success.¹³

Table 1: Enrollment of CUNY Community Colleges, fall 2010

Institution	Borough	Full-Time Enroll	Part-Time Enroll	Total Enroll	Enroll Trend 2005-10	Minority Enroll
BMCC	Manhattan	14,634	7,392	22,026	+18%	78%
Bronx	Bronx	6,188	4,159	10,347	+21%	92%
Hostos	Bronx	3,738	2,112	5,850	+31%	84%
Kingsborough	Brooklyn	11,196	3,767	14,963	+28%	62%
LaGuardia	Queens	10,005	5,562	15,567	+27%	95%
Queensborough	Queens	9,197	4,574	13,771	+22%	67%

Source: City University of New York

In today's information age, a college education has become the minimum requirement for a significant share of the jobs in the city that pay middle-income wages and provide a path to upward mobility. Several blue collar fields now require at least some college coursework, while most of the middle class job titles that are projected to grow in the years ahead—from nurses to legal secretaries—also require either a two- or four-year college degree. Further, the payoff for those with a college degree is greater now than ever before. Individuals who have graduated from college now earn 76 percent more than those with only a high school diploma—up from 36 percent more in the 1970s—and are far more likely to hold jobs that provide health insurance.¹⁴

Four-year colleges and universities open more occupational doors than two-year institutions, yet community colleges may play an equal or greater role in elevating New Yorkers into the middle class and supporting employers who need middle-skill workers.

For tens of thousands of low-income residents and immigrants, New York's community colleges are the only entry point into the higher education system—including those who want to gain a baccalaureate degree but lack the grades, money, language skills or connections to start at a four-year institution. For others, four-year colleges simply don't offer the flexibility they need to take classes while maintaining a full-time job to support themselves and their family.

Recent changes in the economy underscore the urgency of getting more New Yorkers to complete at least a two-year college degree. Indeed, like many other former industrial centers, New York has experienced a decades-long slide in stable, middle income jobs for individuals

with low levels of educational attainment. Since 2000 alone, the city has lost nearly 100,000 manufacturing jobs, a 56 percent decrease, while relatively low-paying jobs in home health care (up 114 percent), social assistance (16 percent), and food services (29 percent) have all grown rapidly in that time. Although Manhattan has been able to attract a highly educated workforce in the professional services industries and is now one of the nation's most prosperous counties, the Bronx, Brooklyn and Queens—comprising 65 percent of the city's population—have all failed to raise their educational attainment levels and grown significantly poorer. In 1970, for instance, all three boroughs had a much higher per capita personal income as a percentage of the U.S.'s than they have today. The Bronx dropped from 93 percent of the national per capita income to 72 percent, and Brooklyn from 100 percent to 87 percent. Most dramatically, Queens fell from 134 percent to 94 percent.

New York's economy could also clearly benefit by providing employers with a deeper pool of college-educated workers. While many New York-based businesses in fields like finance, fashion, media and legal services are able to attract highly educated workers from across the country or around the world, this is not necessarily the case for a long list of other important sectors. Employers who want to hire workers with an occupational certificate or associate's degree are much more likely to draw from a labor pool of local residents.

CUNY community colleges are increasingly critical to New York City's future prosperity for a number of reasons. Yet boosting enrollment is not sufficient—more of those enrolled need to graduate.

STAYING IN AND DROPPING OUT

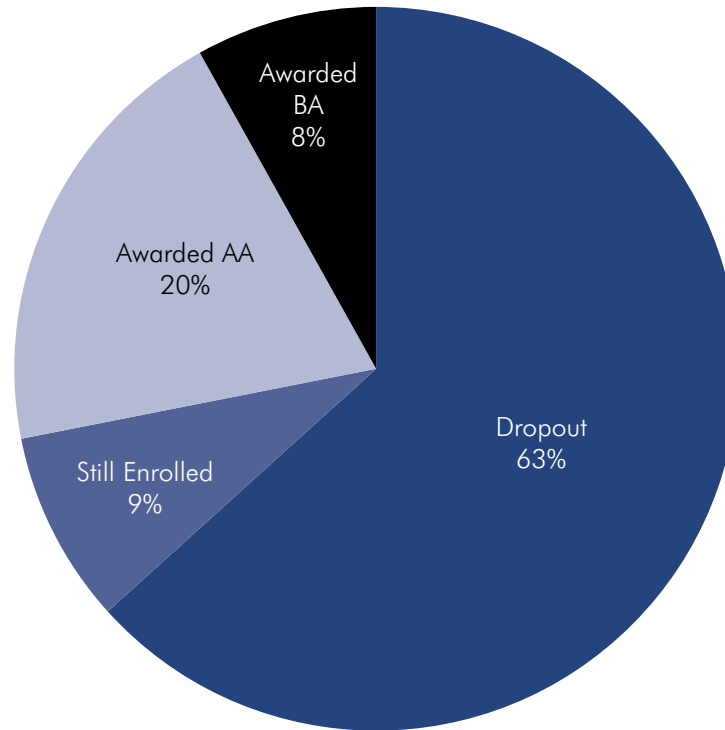
For every ten freshmen who entered a CUNY community college in 2004, only three earned an associate's or bachelor's degree within six years. These are disappointing numbers, yet fairly typical for community colleges around the United States. According to a federal survey that tracks college students over time, only 26 percent of high school graduates entering community colleges obtained an associate's or bachelor's degree within six years.¹⁵

Community colleges nationwide struggle with the contradiction between attaining high graduation rates and remaining open to all applicants, no matter what their background. In fact, the typical community college student differs dramatically from the typical student who starts at a four-year college. Most community college students work; some work and study full-time. Most are adults living independently.

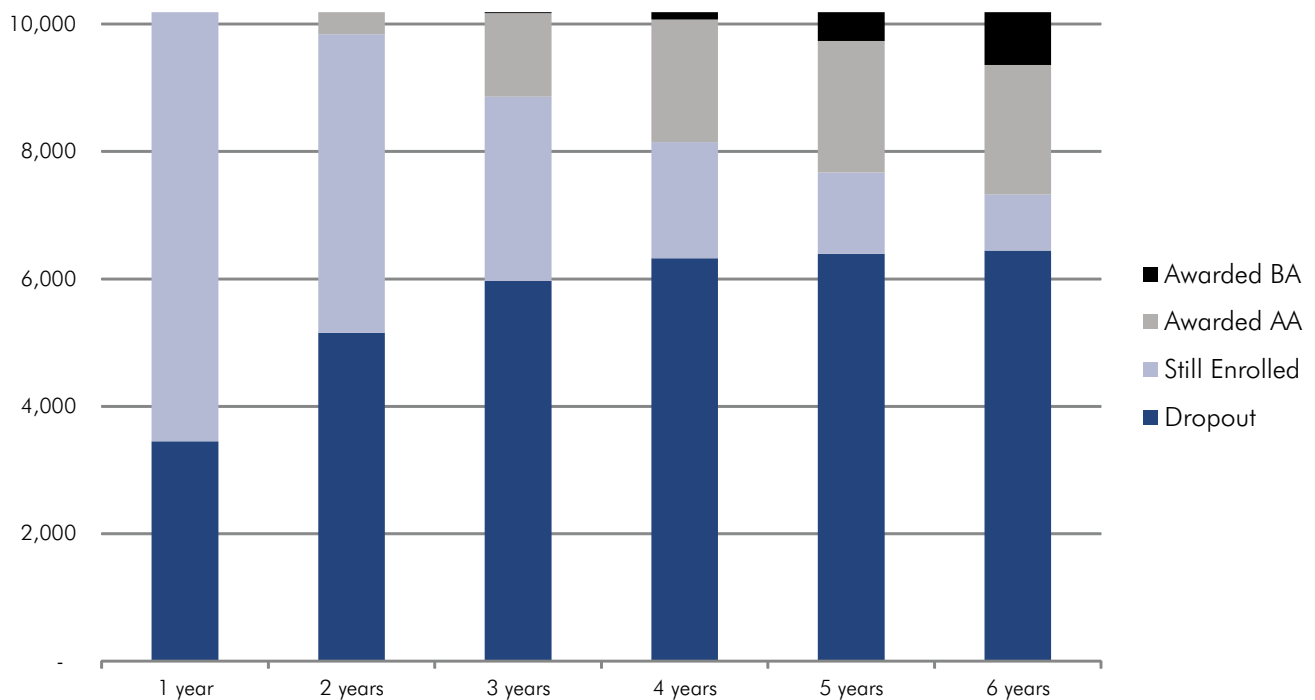
While associate's degrees are theoretically two-year programs, almost no one finishes one in two years. The federal government has set three years as a compromise goal, but only a minority of students complete an associate's degree in that timespan either. As a result, some community college students take longer to complete an associate's degree than most students who begin at four-year colleges take to complete their bachelor's degrees, which typically require twice as many credits. In addition, a significant number of community college students transfer to four-year colleges to complete bachelor's degrees.

CUNY administrators track institutional retention and completion rates in great detail so that they can manage institutions more effectively, identify emerging trends quickly and benchmark new policies and strategies. They provided a wealth of administrative data on graduation and dropout patterns at CUNY's six community colleges. Reviewing this data for students entering community colleges in fall 2004, we found the following:

- After six years, roughly two in ten had earned an associate's degree, one in ten a bachelor's degree, and six in ten had dropped out. One in ten was still enrolled and taking classes. Out of 10,185 students, 2,862 earned an associate's or bachelor's degree within six years. See chart 2.
- Dropout is most serious in the first two years. After one year, one-third of the starting cohort had dropped out. After two years, half of the starting cohort had dropped out. After three years, another 8 percent had dropped out. Between years four and six, the number of dropouts increased by only four percentage points. See chart 3.
- Most associate's degrees are earned by the end of year four, most bachelor's degrees by the end of year six. However, CUNY community college students continue to make progress after the six year mark. CUNY has followed the 2000 cohort for a full decade, showing that between year seven and year ten an additional five percent earned degrees.
- No currently existing database can fully capture the true graduation rate at CUNY community colleges, because no database follows students who transfer out of the CUNY system altogether. While CUNY administrative records show that 63 percent of the 2004 cohort dropped out within six years, 11.8 percent (1,202 students) actually transferred out and could no longer be counted. A true record would probably show that a quarter to a third of these students actually graduated from another institution.¹⁶

Chart 2: Status after Six Years, 2004 Community College Cohort

Source: City University of New York

Chart 3: Progress in Achieving a Postsecondary Degree by year, 2004 Cohort

Source: City University of New York

CUNY's data also enable us to explore some pressing questions about the students who drop out.

Which students drop out?

- Graduation rates are lower for minority students. After six years, 32 percent of white students earned a degree, compared to 22 percent of African-American students and 23 percent of Hispanic students.
- Part-time students are much more likely to drop out than students studying full-time. The six-year graduation rate in associate-level programs for full-time students who entered in 2004 was a full ten percentage points higher than for part-time students.
- Students enrolled in Business, Management, and Related Support Services are almost 50 percent more likely to graduate than students in health-related majors.¹⁷ See chart 4.
- Of the six community colleges, Kingsborough has a six-year graduation rate of 36 percent, the highest in the system. See Chart 5.

Why do community college students drop out?

The issues around community college dropout have been the subject of much research and even more debate. Almost any short explanation of the likely causes of dropout is doomed to oversimplify. Yet experts generally agree that the main problems relate to a mix of student preparation, outside commitments, and the student experience in college.

Student preparation and outside commitments.

Community colleges take on a wide mix of students, including many who obtained an alternative high school diploma, failed to obtain a college-ready education, or are entering from the workforce after a long absence from education. Not only are these students likely to need time to catch up, they have other commitments as well

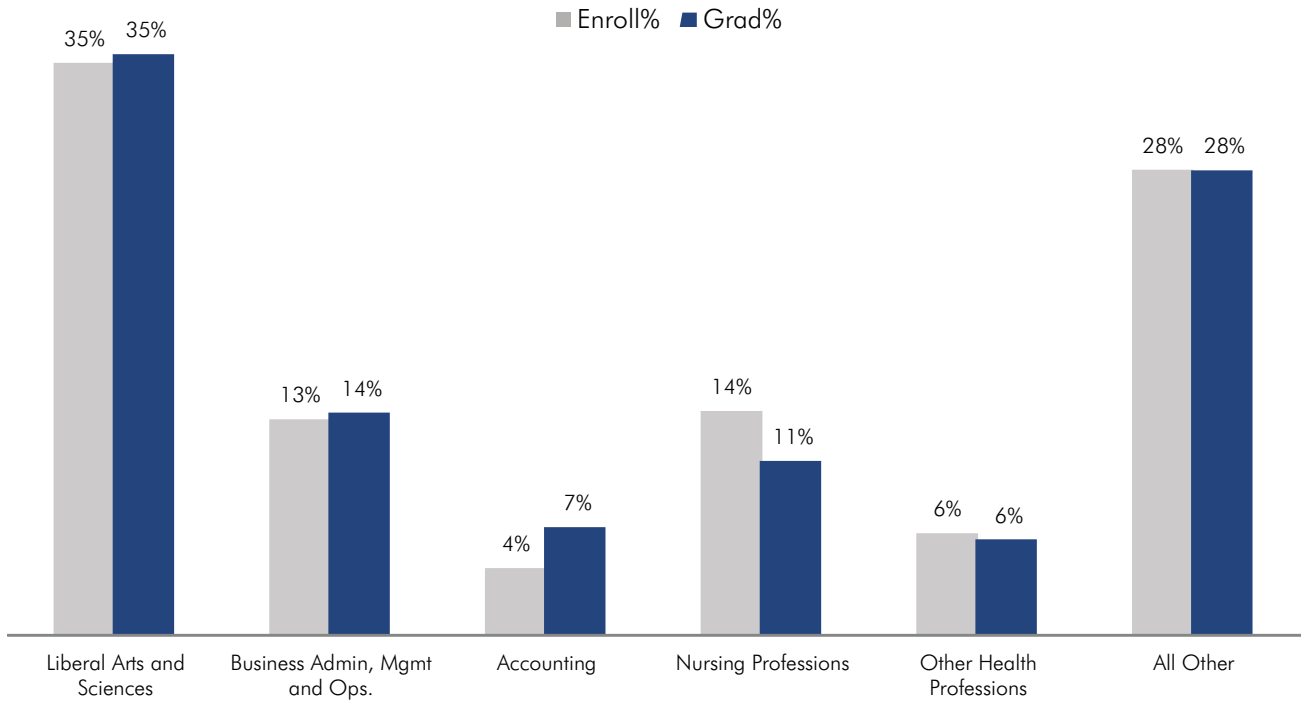
Between 2000 and 2009, adjusted for inflation, state operational aid to CUNY community colleges fell by 27 percent.

to work and family, and they are vulnerable to financial, medical or family emergencies that can drive them out of school.

CUNY conducts a biannual study of its students, and comparing their findings to the best evidence on risk factors for student dropout shows an extremely high correlation. Half of all community college students have an annual family income of less than \$20,000 and are the first generation of their family to attend college. Three in ten work more than 20 hours each week, and four in ten attend school part-time. See chart 6.

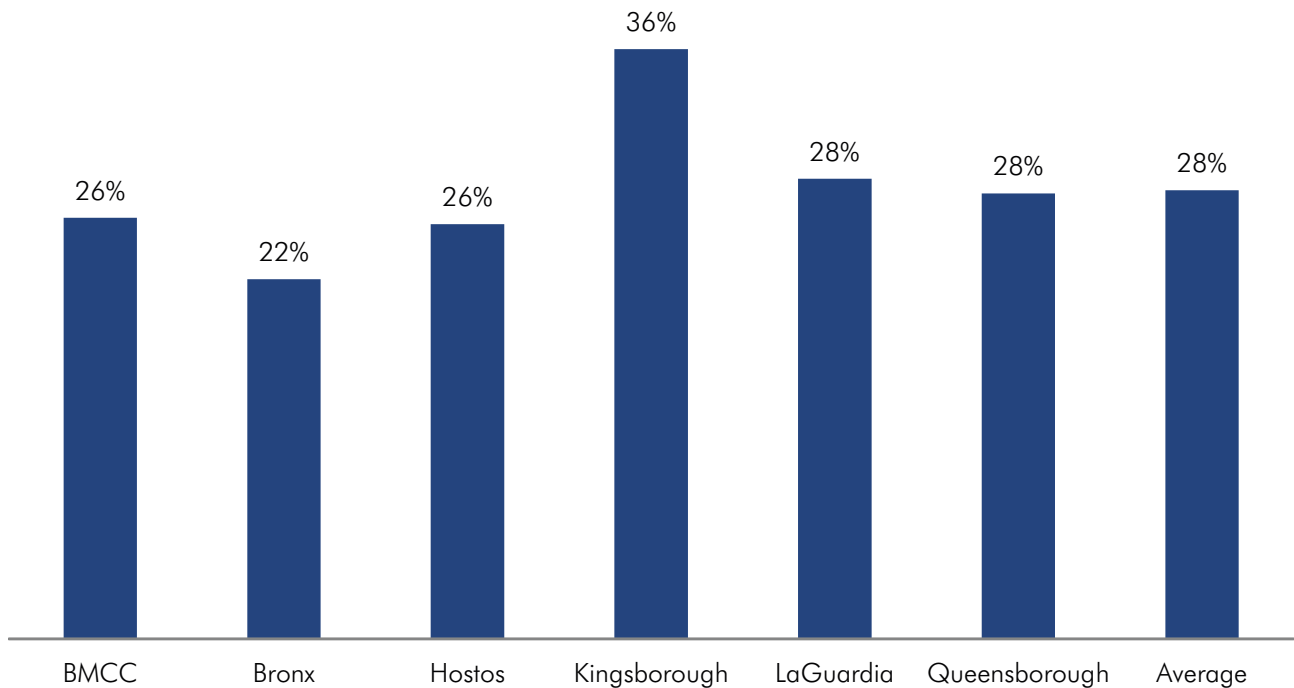
Academic preparation is a serious problem, as one would expect for young adults (and many older ones as well) who struggled in high school. Of those who arrived from a public high school in New York City, 74 percent place into remediation, 32 percent fail their math proficiency exam, 36 percent fail in writing proficiency, and 18 percent fail in reading proficiency. These students must take developmental courses that provide no credit towards completing a degree and cost as much as college-level courses, and their chances of dropout are far higher than students who test into college-level courses immediately. A recent CUNY analysis found that even for students who reach the last remedial course, "pass rates on CUNY's exit tests are discouraging – just 58 percent for reading, 52 percent for writing, and 65 percent for math."¹⁸

Chart 4: Six-Year Graduation Rate by Program of Study, CUNY Community College System



Source: CUNY Office of Institutional Research and Assessment. Figures based on 2004 cohort.

Chart 5: Six-Year Graduation Rate by Institution, CUNY Community College System



Source: CUNY Office of Institutional Research and Assessment. Figures based on 2004 cohort.

While student preparation may seem beyond the scope of a community college's control, considerable energy is now going into effectively preparing high school students for postsecondary enrollment. New York City schools are in the process of transitioning to the Common Core Standards, a set of competencies in math, reading and writing that align with college entrance standards. If the transition goes as planned and is appropriately funded, high school students a decade from now will not only learn what they need to graduate—they will learn what they need to enter college without taking a developmental education course. CUNY is also working with the New York City Department of Education through the Graduate NYC initiative to provide feedback to high schools on the postsecondary outcomes of their graduates.

Enabling low-income students to stay in school is a key purpose of financial aid. New York State has the Tuition Assistance Program (TAP), which provides need-based aid to college students. In addition, CUNY has developed a partnership with Single Stop USA, a non-profit organization, to assist community college students in obtaining and keeping benefits that can help them make ends meet while they are in college. Single Stop USA staff screen for public benefits, assist with tax preparation, and connect students to legal and financial services. "It's turned into something more than any of us expected," says David Croft, coordinator for LaGuardia Community College. "I've been meeting with lots of students with major issues, doing a lot of work on an interpersonal level, letting them know that they have options. By the time they come to me they're in a crisis. We bring them to a problem-solving level."

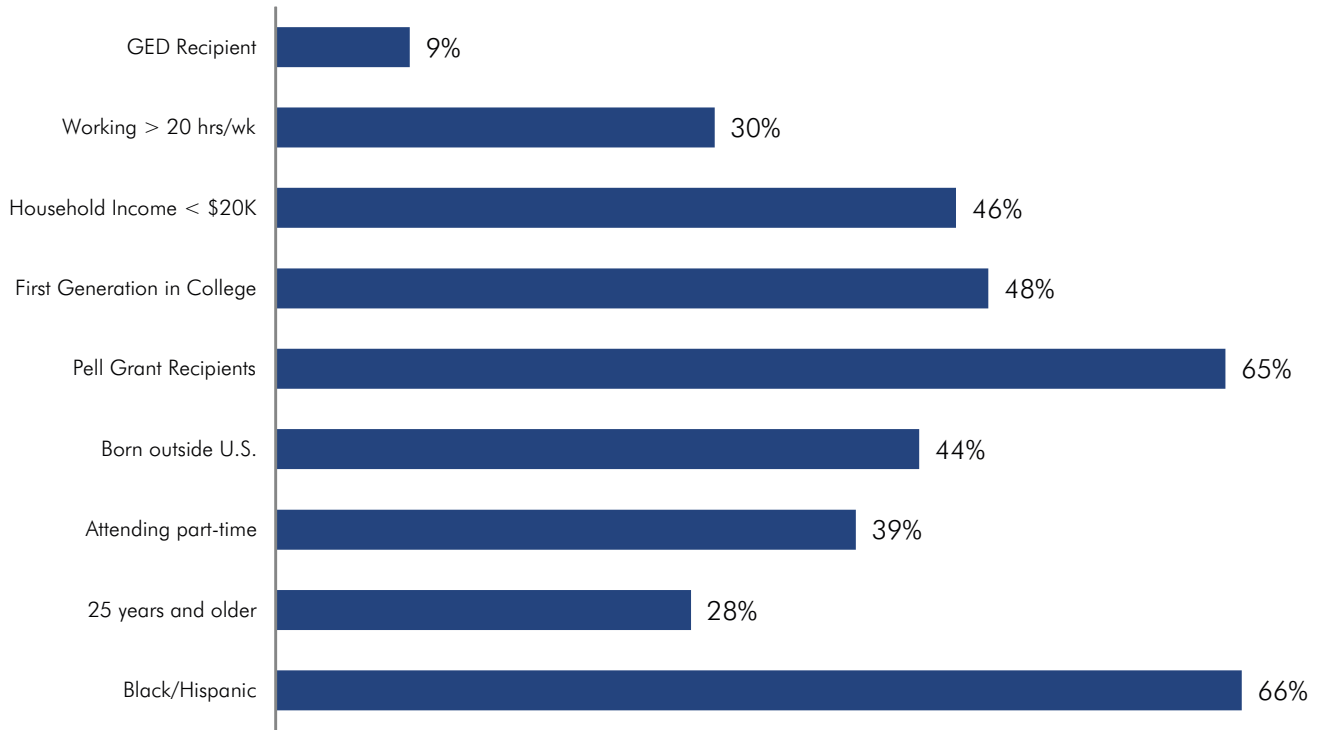
Student experience in college. Community colleges have considerable difficulty identifying and scaling up the most effective practices for building academic momentum for their students. Some of the key determinants of momentum or dropout include:

- **Developmental Education:** Many students are referred to developmental education and either drop out or spend too long

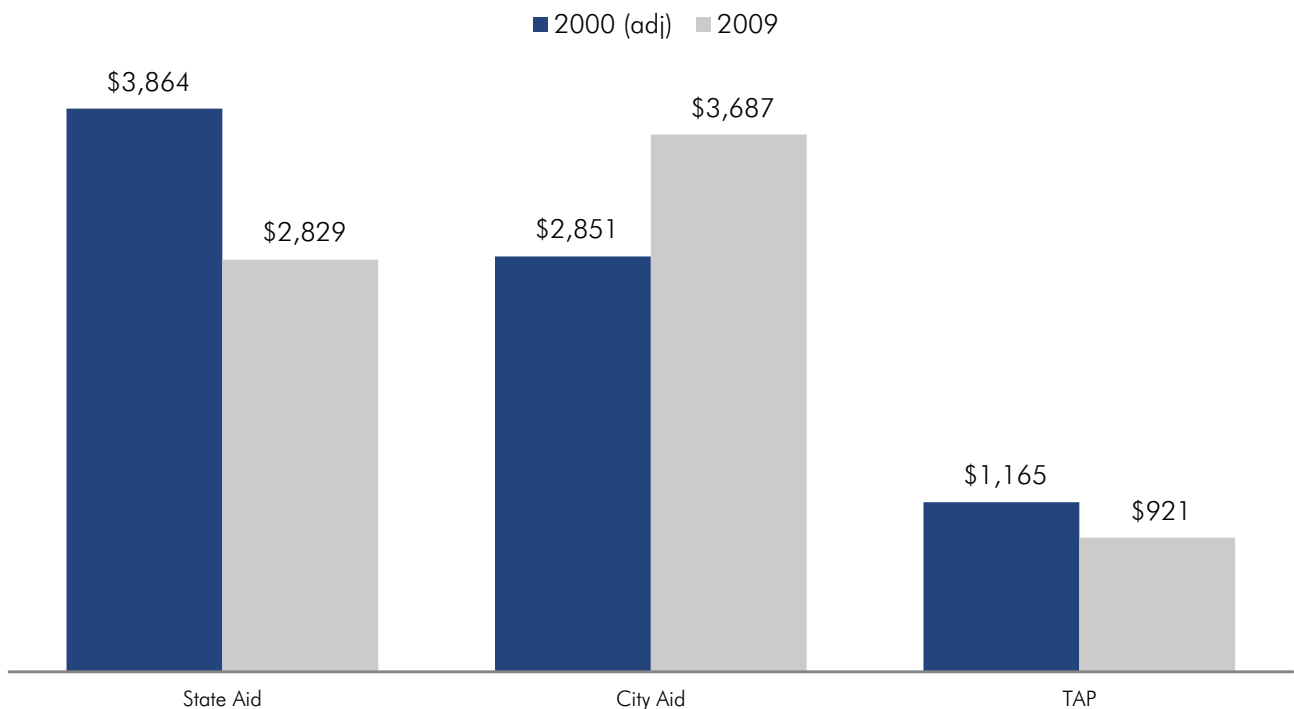
taking remedial courses that do not count to their major. Community colleges are working to change the way in which students are assessed and placed in developmental education, the structure and curriculum of the developmental education course, and the way in which those courses relate to credit-bearing coursework.

- **Planning:** Many students enter college and promptly get lost. Most damagingly, they take too long to declare a major or program of study. This results in wasted time, excess credits and expired financial aid. Community colleges are working to develop skill maps and other educational planning vehicles to get students on track and keep them on track.
- **Articulation and transfer:** When students transfer from a community college to a four-year college or university to seek a baccalaureate degree, the receiving college often disallows transfer credits, thereby wasting coursework and prolonging the time to graduation. Earlier this year, CUNY implemented an articulation and transfer system that may ease the transition between institutions.

A key obstacle that community colleges face in improving the student experience is inadequate and declining funding. At CUNY, as at other community colleges around the country, the state provides less than half the funding to community colleges that it provides to four-year colleges. Over time, that funding has dropped significantly. Between 2000 and 2009, adjusted for inflation, state operational aid to CUNY community colleges fell by 27 percent and TAP funding dropped by 12 percent.¹⁹ Fortunately, the City of New York stepped forward to fill some of the gap. But overall, public support for the community college system dropped by 6 percent. (See Chart 7.) These continuing cuts threaten to hollow out institutional capacity for more effective educational delivery.

Chart 6: Profile of CUNY Community College Students

Source: City University of New York.

Chart 7: Change in Funding, FY 2000 – FY 2009, CUNY Community College System, per Full-Time Equivalent.

Sources: City University of New York Budgetary Analysis, Higher Education Services Corporation Annual Report. Data adjusted for inflation using the Higher Education Price Index.

DROPPING OUT OF COLLEGE COSTS STUDENTS AND THE ECONOMY

Study after study has found college graduates to be more productive than non-graduates, and therefore more highly compensated by employers. To explore the connection between college graduation and competitiveness at the individual, economic and public levels, we explored three propositions: first, that low-income and minority New Yorkers benefit from graduating at (or through) a community college); second, that higher graduation rates provide a public benefit through enhanced tax revenues; third, that the state and city to some degree already recognize the value of community colleges by funding them through operating aid and financial aid, but that higher graduation rates would lead to a greater return on investment.

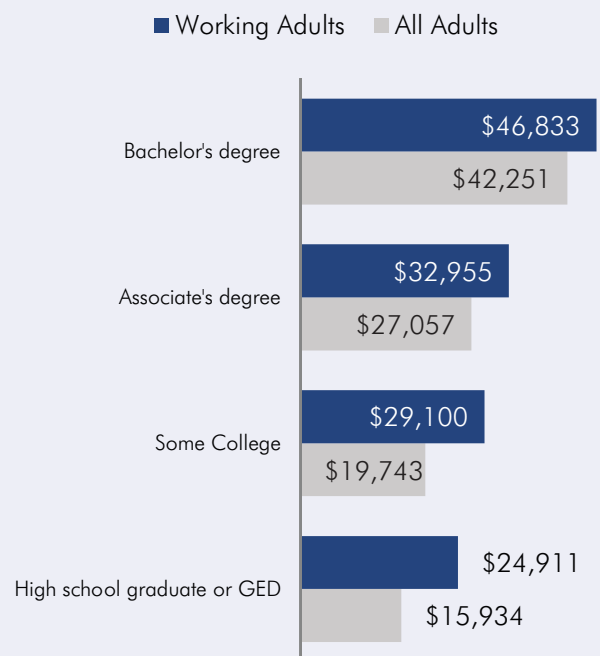
We looked first at the value to individual students and the New York City economy. The earnings differential between adults who stopped after high school graduation and adults who continued on to graduate from college is wide and stable over time, despite large increases in the number of college-educated adults. See chart 8. But the difference between graduating college and dropping out is harder to disentangle. Federal surveys generally ask whether the respondent obtained “some college but no degree.” Unfortunately, a “yes” answer could mean anything from dropping out of a community college in the first semester to dropping out of a baccalaureate program in the last semester. The more college education a student receives, the higher their career earnings are likely to be; a student at a four-year college who leaves after three years may actually have more education than a graduate with an associate’s degree.²⁰

According to CUNY data, 72 percent of the community college cohort that enrolled in 2004 failed to graduate in six years. This means that of 10,185 students, 7,323 failed to graduate, 6,447 of them because they had dropped out. We can

calculate the one-year cost of an individual failure to graduate by subtracting the median income of New York City residents with an associate’s degree from the median income of residents with some college and then multiplying that number by 7,323.

The median income of New York City residents with an associate’s degree between the ages of 25 and 29 (a good gauge for people entering the workforce) is \$27,057 per year. The median income of 25-29 year olds with some college but no degree is \$19,743 per year. The income differential between the average community college graduate with an associate’s degree and a dropout with some college is \$7,314. Thus the total lost income of the 2004 entering

Chart 8: Total Personal Income by Educational Attainment Level, Ages 25-29, NYC



Source: American Community Survey, 2007-09.

class compared to graduating with an associate's degree would have been roughly \$53.6 million for one year.

Even this large sum understates the earnings loss created by the large number of students who drop out or fail to graduate in a timely manner. An important role of CUNY's community colleges is to train students who then transfer to a comprehensive college or university to obtain a Bachelor's degree. About eight percent of the entering class of 2004 obtained a Bachelor's degree, which pays, on average, \$42,251 annually for adults in the 25-29 age group. Factoring in the proportion of dropouts who could have continued on to obtain a Bachelor's degree (approximately 28 percent of all community college graduates) raises the median income of community college students who ultimately receive an AA or BA degree to \$31,463. That is \$11,720 more than what someone in this age group would make with some college but no degree. As a result, we calculate total lost income to be \$85.8 million for one year.

We also calculated the loss over time by, first, reducing the size of the group of dropouts by five percent to reflect those individuals who earned a degree after the six-year mark (based on CUNY data from the 2001 cohort). Nonetheless, lost earning power of this group of dropouts would grow to \$815 million over ten years, 1.6 billion over two decades, and more than 2.4 billion over the course of a 30-year career.²¹

It should be noted that as enrollment at CUNY's community colleges rises, so do the stakes. If we look at the 2009 entering class of

14,964 community college students, it becomes apparent that the much larger size of the student body will lead to a much larger private and public cost if nothing changes. Thus the 2009 dropouts will lose approximately \$126 million in earnings in a single year and \$3.6 billion in thirty years.

Raising the six-year graduation rate of the community college entering class of 2009 by 10 percentage points would add \$17.5 million in direct earnings to the regional economy. Of course, not all college graduates stay in the community. A CUNY survey utilizing a locator service found that some graduates move out of the city, but graduates with associate's degrees are the most likely to stay.²² Of those students who graduated in 2005, only 5 percent of associate's degree graduates and 12 percent of bachelor's degree graduates had left the city. Adjusting for these "out-migrations" reduces our estimate of the earnings boost of a 10 percent graduation rate increase only slightly, to approximately \$16 million.

Another way of looking at the income gap is to consider the way higher income builds wealth in a local community. A college graduate who earns a higher salary and at a stable employer spends much of his or her wages in the community: groceries, clothes, a better apartment. The multiplier effect of this spending ripples through the economy. Based on data from EMSI, the leading labor economics firm in the field of higher education, we estimate that the income multiplier effect is roughly 1.8 times the income difference between graduates and dropouts.²³ For each graduate (a composite of Associate and

Table 2: Tax Liability of Adults in New York City by Educational Attainment

	Some College	AA Degree	Difference
Income	\$19,743	\$27,057	\$7,314
City Income Tax	\$1,047	\$1,780	\$733
State Income Tax	\$1,352	\$2,138	\$786
Federal income Tax	\$1,138	\$2,240	\$1,102
Total Tax Liability	\$3,537	\$6,158	\$2,621

Source: Data Center for an Urban Future projected tax burdens based on hypothetical adult using tax forms issued by the following agencies: New York City Department of Finance, New York State Department of Taxation and Revenue, and U.S. Internal Revenue Service.

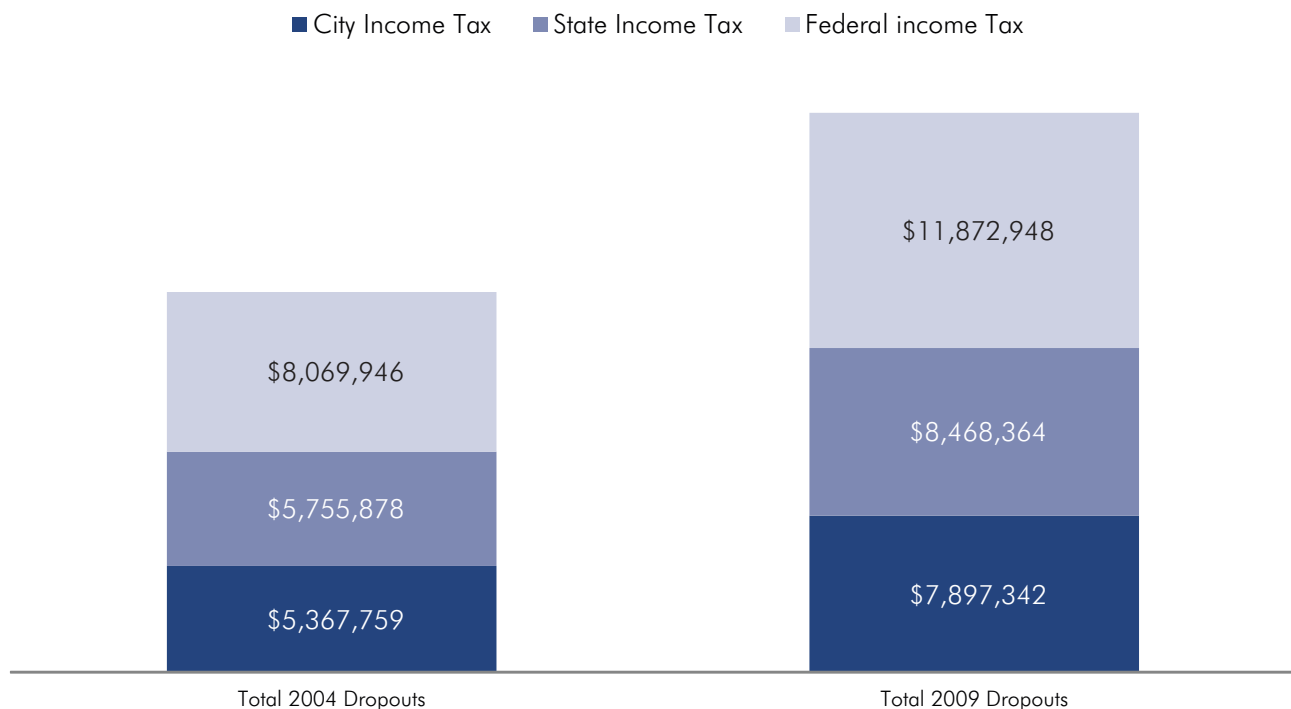
Bachelor's degree holders), the income difference is \$11,720, and we estimate the lost economic activity due to the 7,323 students who dropped out of the 2004 entering class at approximately \$153 million. For the larger class of 2009, the lost economic activity adds up to \$226 million, and raising the graduation rate by 10 percentage points would add \$28 million in economic activity. Note that this estimate is based primarily on the higher wages paid to college graduates because of their higher productivity, but the employer also realizes higher net profits that go elsewhere: the income of the owners or stockholders, expanded sales volume, and so forth.

With income projections in hand, we turn to the second proposition, which is that higher graduation rates provide a public benefit through enhanced city, state and federal tax revenues. A New York City resident between the ages of 25 to 29, with some college education but no degree, would have a median annual income of \$19,743. That resident would typically owe \$1,138 in federal income tax, \$1,352 in state income tax,

and \$1,047 in city income tax. Total income tax liability would be \$3,537. A New York City resident with an associate's degree would have a median annual income of \$27,057 and a total income tax liability of \$6,158. See table 1.

For the class that entered in 2004, the total lost tax liability in a given year of those who failed to graduate with at least an associate's degree is estimated at \$19 million. For the class that entered in 2009, the lost tax revenues will add up to more than \$28 million annually. See chart 9. Keep in mind that these projections are conservative in several ways. We have not estimated the differential in property taxation, which is likely to be substantial. We have not included the higher wages of community college graduates who went on to earn a bachelor's degree. Nor have we projected wage growth as these young adults move into their 30s and 40s, when the earnings differential is likely to grow substantially. The widening wage gap will also create a savings gap that compounds over time.

Chart 9: Total Lost Tax Receipts for 2004 and 2009 Cohorts, CUNY Community College System



Sources: U.S. Internal Revenue Service, New York State Department of Taxation and Revenue, New York City Department of Finance.

PUBLIC COSTS OF COMMUNITY COLLEGE DROPOUT

The costs of college dropout play out on a private stage and, writ large, in our regional economy. But there are also costs to taxpayers. Each year, government programs underwrite much of the cost of public higher education. Indeed, this is what separates public from private. Taxpayers receive a return on their investment with every student who walks across a stage to receive a diploma. It is in the public interest, therefore, to ensure that as many students as possible will walk across that stage.

It should be understood that many community college students who drop out provide a return on public investment as well – but as the preceding section shows, a smaller one. The diploma makes a difference, and the public has an interest in maximizing the number of community college students who achieve their degrees.

We looked at the primary public funding sources for community colleges: base operating aid, Pell grants and state Tuition Assistance Program (TAP) grants, and multiplied the per-student cost of each program by the number of eventual dropouts who were still enrolled as of that year. Then we added across the six-year span. In the first year, the per-student amount of the three programs was multiplied by the entire population of eventual dropouts. By year six, only 51 students remained.

Collectively, we found that New York City, New York State and the federal government spent almost \$18,000 on each student who dropped out of a CUNY community college.

Base Operating Aid: The primary funding source for community colleges is base operating aid, funding provided by New York City and New York State. In 2009, CUNY community colleges received \$5,507 per student.²⁴ The state and city both contribute to the community colleges'

bottom line, but funding has slipped over time, leaving New York City to shoulder an increasingly large share of the financial burden. In 2000, New York State covered 58 percent of the operating cost of the CUNY community college system. By 2009, after a decade in which state funding rose by about 50 percent while city funding almost tripled, the state provided only 43 percent of the community college budget. In all, we estimate that \$8,688 in base operating aid went toward each dropout.

TAP Grants: New York State funds the Tuition Assistance Program, a system of need-based grants to undergraduate college students. In most cases, the grants are available on a sliding scale to students or independent students who earn less than \$80,000. Students in associate-level programs can receive TAP grants for three years of full-time study.²⁵ We therefore counted only the first three years of enrollment in calculating the value of TAP grants to CUNY community college students. We used an average grant of \$1,693 per student annually for our formula, and calculated that the TAP grant per student averaged \$2,819.

Pell Grants: the federal government funds Pell grants, a system of need-based grants to undergraduate college students. These grants are more widely available than TAP grants and continue over a longer period. We used an average grant of \$3,536 per student annually for our formula, and calculated that the Pell grant per student overall averaged \$6,245. See Chart 10.

The combined funding total of \$17,783 per dropout implies a precision that does not exist in the real world. Dollar figures are not adjusted for inflation. Constant enrollment for fall and spring

semesters is assumed, when some fall students do not enroll in the spring and vice versa. Also, we have not calculated the cost of other public funding sources, such as TRIO and Perkins programs and the subsidy portion of Stafford loans at the federal level, or the Educational Opportunity Program and Aid for Part-Time Students at the state level. Nonetheless, these figures capture the primary public costs of support for community college students who drop out.

The benefits of improving community college graduation rates are clear. If the graduation rate for the entering class of 2004 had been 10 percentage points higher, the public would have saved \$18.1 million that in fact went to community college dropouts. It is not too late to support the current class of community college students. If the entering class of 2009 can boost its graduation rate by 10 percentage points, the public will save more than \$26.6 million in operating aid, Pell and TAP benefits.

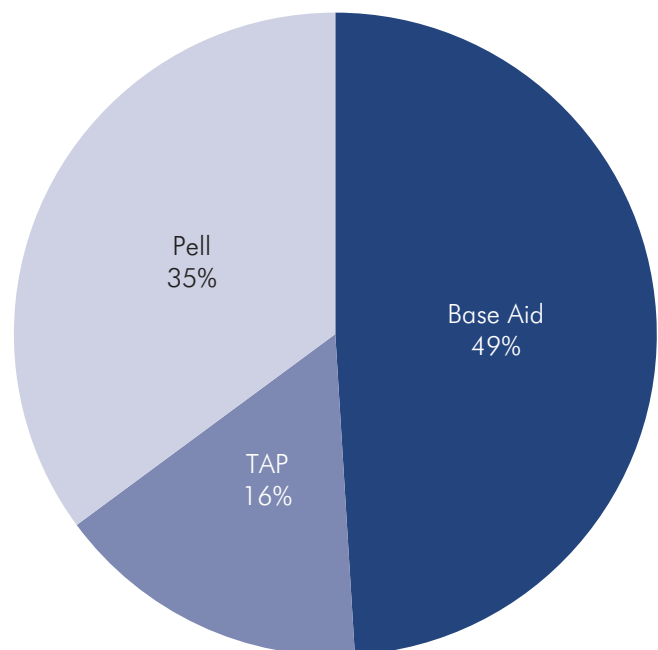
Not all of the benefits of a community college education are strictly monetary:²⁶

- **Health:** Each year of education beyond high school reduces the probability of smoking by 3 percentage points; of being obese by 1.4 percentage points; and of being a heavy drinker by 1.8 percentage points.²⁷
- **Public assistance:** Women who graduate from college while on welfare are far less likely to return to public assistance (20 percent versus 50 percent), and have far lower rates of family poverty (43 percent versus 68 percent).²⁸
- **Transmission of educational benefits to children:** Among parents with a bachelor's degree, 68 percent read to their children daily, compared to 57 percent of parents with an associate degree, and 47 percent of parents with some college but no degree. Only 41 percent of parents whose educational attainment ended with high school graduation read to their children. Preschool children whose parents had

bachelor's degrees were more than twice as likely as children of high school graduates to recognize all of the letters of the alphabet.²⁹

The city, state and federal governments pay for a wide variety of social services to the vulnerable and poor: Medicaid services to adults with chronic conditions such as diabetes and high blood pressure; public assistance benefits; correctional services; unemployment insurance; and many others. These programs are difficult to quantify, but they are expensive to finance and operate. The payoff from reducing some of these expenses, notably the health-related ones, is probably higher than many of the returns on investment cited in this report.

Chart 10: Public Funding for CUNY Community College Students by Major Source, 2009



Sources: CUNY Office of Institutional Research and Assessment, New York State Education Department.

COLLEGE DROPOUTS ARE A LOST ECONOMIC ASSET FOR NEW YORK CITY'S EMPLOYERS

It is one thing to show that college graduates with associate's and bachelor's degrees earn more and spend more time employed than college dropouts. But it is quite another thing to show that they are in demand in the present labor market.

While college graduates have advantages in applying for jobs, they still face extended periods of job search due to the low number of new openings and retirements in most workplaces. According to an annual CUNY survey of certificate and associate graduates, the rate at which these graduates find employment "directly related to my program of study" within six months of graduation has fallen from 30 percent in 2006-07 to 14 percent in 2009-10. "It's not hard to find people nowadays with the skills and education level you need," says Roz Wilkins, CEO of Aides at Home Inc. "Five years ago it was difficult, but the economy changed that."

Yet opportunities will certainly emerge over time for community college graduates, especially as the economy recovers. At the associate degree level, the health care field looks especially

promising: Registered Nurses, respiratory therapists and dental hygienists are all projected to have numerous openings to 2018. The national health care reform law expected to accelerate openings in ambulatory health care delivery. Computer support specialists of various kinds are expected to be highly in demand. Other occupations, such as legal secretaries, and interior designers have very favorable employment projections. See table 3.

We reached out to more than two dozen companies and trade associations to get behind the numbers and learn how employers view community college graduates. To a significant extent, the people who interviewed mentioned that they are increasingly looking to hire individuals with a college degree. Among the themes that emerged from our interviews:

New employees often need soft skills to handle the job, not just vocational training. "The most important skill is communication: being able to understand, to observe and report," says Audrey Penney, chief operating officer of the Visiting

Table 3: Jobs Requiring Associate's Degree with "Very Favorable" Employment Prospects in New York City, Projected to 2018

Job Title	Median Wage	Annual Average Openings
Registered Nurses	\$81,940	1,950
Interior Designers	\$66,530	120
Dental Hygienists	\$78,770	130
Life, Physical, and Social Science Technicians, All Other	\$39,920	220
Legal Secretaries	\$51,710	250
Paralegals and Legal Assistants	\$66,960	410
Physical Therapist Assistants	\$50,370	50
Computer Support Specialists	\$54,640	560
Respiratory Therapists	\$69,220	70

Source: Midwest Study; a. Northwest Study.

Nurse Association of Staten Island. “A high school person will need four to five years experience to perform these services, whereas someone with a community college degree can perform the functions right away.” Lisa Baez, owner of Ageless Home Care, prizes college graduates for their problem-solving skills. “A degree doesn’t necessarily make you a smarter person, but it makes you a person who could take a problem apart and put it together again,” suggests Baez. “It gives you critical thinking skills.”

The increasingly central role of computerized and online technology makes college graduates indispensable in occupations that previously did not require them. Sue Glassey, director of training and development at Tishman Construction Corp., reports that her managers value community college graduates for their ability to adapt to computerized databases: “Even superintendents have to use software, keep track of people’s hours, contractual terms, and so on. In community college, they have to evaluate and analyze data.”

Precisely because employers are hiring few individuals now, they want more from each new hire – which means upgrading educational qualifications.

“Jobs are so few,” remarks Chiquita Wilson, director of staffing and human resources at Hunter Roberts Construction Group. “Of course we’ll look towards the person who has the degree and the experience.”

Our interviews did identify potentially negative trends for community college graduates. The Bachelor’s degree seemed to possess a signaling value to employers that the associate’s degree did not. Thus an employer may view any Bachelor’s degree attainment as a sufficient job qualification, but impose case-by-case scrutiny on associate’s degree holders. There was also anecdotal evidence of “credential creep” that might impact job opportunities, particularly in nursing. Respondents reported that the trend is for health care employers to seek Registered Nurses with Bachelor’s degrees, which would leave RNs at the associate’s-level under-credentialed. Of course credential creep can benefit community colleges as well, as occupations previously requiring only a high school diploma or certificate grow in complexity to the point where an associate’s degree program is called for.

CUNY IS A NATIONAL LEADER IN TRYING TO IMPROVE STUDENT SUCCESS AT COMMUNITY COLLEGES

Community college leaders around the country display varying levels of commitment to improving student success. Some administrators make excuses for their institution’s inadequate graduation rate, while others recognize that if their students do not graduate and succeed in the labor market, their institution is failing in its underlying mission. CUNY clearly belongs to the latter camp. Under Chancellor Matthew Goldstein, CUNY has articulated clear graduation-rate goals, implemented three system-wide student success initiatives, launched its first new community

college in forty years in a way that could drive systemic reform, and encouraged equally bold reform efforts at several campuses.

Dr. Eduardo Marti, CUNY’s senior vice chancellor for community colleges, has no time for excuses. “Some people believe that providing access is enough. I disagree. I think it’s unconscionable for colleges to accept students and offer them the promise of a degree, and then not do everything possible to make sure they get one. I think it lowers the self-esteem of the

student to enter college with high hopes and then be forced to drop out.”

The following are some of CUNY’s innovative attempts to improve community college graduation rates:

Graduate NYC! The Graduate NYC! College Readiness and Success Initiative, launched in August 2010 with funding from the Bill & Melinda Gates Foundation, partners CUNY with the New York City Mayor’s Office, the NYC Department of Education, other city agencies and a group of local community- and school-based organizations. By the year 2020, the city will hold education institutions accountable for significantly increasing the number of students who graduate from high school meeting a basic standard of college readiness, increase the number of students enrolling in college, and improving graduation rates at CUNY’s community and senior colleges. For the community colleges, this will entail raising the three-year graduation rate for associate degree students to 25 percent and the four-year rate to 40 percent.³⁰ Graduate NYC! activities focus on three key drivers:

- Transforming culture in New York City related to college readiness and success;
- Using data to drive change and the community accountable for success; and
- Changing practices to reflect an orientation toward student success.

One key component of the Graduate NYC! initiative is development of a longitudinal tracking database that will enable the city’s institutions to better understand student progress from and through high school and college.

CUNY ASAP: In 2007 CUNY established the Accelerated Study in Associate Programs (ASAP) initiative at all six community colleges with funding from the Mayor’s Center for Economic Opportunity. ASAP brings together at least five different supports for low-income students with a goal of helping them graduate within three years. The first cohort was comprised of students fully proficient in reading, writing and math.

Since 2009, ASAP has targeted some students with developmental needs.

ASAP’s design features include required full-time study in a limited group of majors; consolidated course schedules; intrusive counseling, in which low test scores or other setbacks bring a swift call from a college counselor; faculty engagement, career development, and academic support services. Financial incentives include a waiver of any tuition and fees above the level of financial aid received, monthly MetroCards, and free use of textbooks. Together, these supports have led to impressive gains in retention and credit accumulation. After three years, 55 percent of the 2007 entering cohort graduated with an associate’s degree, more than double the rate for similar students. The fall 2009 ASAP cohort, the first to enter with developmental needs, experienced a two-year graduation rate of 27.5 percent, nearly four times the rate for similar students. CUNY has just announced an expansion of ASAP at all community colleges with the goal of serving 4,000 students by 2014.

CUNY START: For new students who test poorly in the three main remedial subjects, the Office of Academic Affairs has developed the CUNY START initiative. CUNY START provides transitional bridge programs in math, reading and writing. Students pay a nominal fee to take 25 hours a week of study, with a focus on helping students avoid remediation altogether by testing into college-level coursework. Program administrators have taken the opportunity to rethink course delivery and goals, a particularly vital opportunity for math, the graveyard of many a college freshman’s aspirations. Math is the largest obstacle to first-year college completion, so progress along this dimension could dramatically improve student success at community colleges throughout the CUNY system. Initially designed to help GED-holders successfully transition into college, CUNY START is now available to any student with high remedial needs.

Pathways to Degree Completion: In June 2011, CUNY implemented a system-wide articulation and transfer system. This system will make the transition from one community college

to another, and from community colleges to senior colleges, much easier. At present general education requirements vary by campus from 39 to 63 credits. Under the new system, all CUNY campuses will adopt a 42-credit general education framework.

New Community College: In the fall of 2012, CUNY will open its first new community college in four decades. But the New Community College (NCC) will not simply respond to demographic needs. From the outset, NCC has been envisioned as the higher education equivalent to a planned community. A CUNY task force reviewed the literature on factors that enhanced student success at community colleges and then shaped NCC to maximize those factors. Some key factors that will make NCC different from other community colleges include:

- Requiring pre-college engagement through a multistep admissions process and a summer bridge program;
- Developing a first-year core curriculum focused on building college-level reading, writing and math skills and interdisciplinary thinking and reasoning skills;
- Merging developmental and disciplinary content to allow students to earn college credits as soon as they enter;
- Limiting the number of programs of study to prevent students from becoming overwhelmed by options;
- Developing experiential learning opportunities outside the classroom;
- Framing a “first-year experience” paradigm that includes learning communities and team-based learning, intrusive advising and early intervention systems for students falling behind.

NCC’s strategies provide an opportunity to test what really supports student success on a

blank slate. Other community colleges in the CUNY system cannot simply pare down their offerings to six programs of study. But NCC will provide a promising test run for principles that could be replicated at other campuses.

CUNY Collaborative Programs: CUNY has an extensive network of collaborative activities with the New York City public school system and in support of out-of-school youth. Some key programs include:

- College Now, the nation’s largest urban dual enrollment program;
- 12 Early College high schools, including the Pathways in Technology Early College High School (P-Tech) that opened in Crown Heights this September;
- CUNY Prep, a college-transition GED program for out-of-school youth;
- At Home in College, a college transition program for GED completers and high school students who have not met college-level benchmarks at CUNY.

Latino STEM Support Network: Queensborough Community College has partnered with IBM to build an innovative early warning system called the Latino STEM Support Network Early Alert System, or LSSN. The program involved creating a tool using IBM’s data analytics technology to identify the most common risk factors that lead students to drop out, allowing school officials and partnering community based organizations to provide a range of interventions as soon as the tool signals behavior that fits one of the risk factors. Initially focused on Latino students—based on data showing that Latino students have the lowest enrollment levels in postsecondary STEM (Science, Technology, Engineering and Math) programs and that 1-in-3 Latino college students drop out during their first year in higher education—the LSSN program is intended to help at-risk students at Queensborough overcome immediate obstacles and ensure that fewer students drop out before graduating.

The LSSN Early Alert System was piloted in the 2011 spring semester, in 10 freshmen STEM classes as well as the “College Life” class required of all first year students. In a short time, it has already achieved measurable results. The pilot program increased the rate at which first-year students earned a C or better by eight percentage points over other students, while there was also a decline in the number of students who registered but did not attend classes—suggesting both that targeted interventions like LSSN can have an impact in reducing dropouts and that data analytics can be effective in helping academic officials understand who needs help and who is succeeding. The initiative expanded to more classes at Queensborough in the fall semester of 2011, and it has potential for expansion to other colleges. “Obviously we would all like to see graduates of the New York City schools better prepared for college, but in the interim the use of data analytics and the implementation of targeted and focused early action is a vitally important, probably essential, way to increase the degree of academic achievement in the short and medium term and in the longer term see an increase in college completion rates,” says Stanley S. Litow, vice president at IBM. “CUNY’s commitment to expanding this on a system wide basis is very encouraging.”

LaGuardia Integrated Health Careers Pathways: LaGuardia Community College has adopted a Washington State program called I-BEST that has produced powerful student retention and graduation results for low-skilled students. I-BEST utilizes pairs of team teachers to provide occupational instruction closely integrated with basic skills instruction. LaGuardia has adapted I-BEST to a set of health care career pathway programs that collectively hold great promise.

CUNY has taken on student completion as a top priority and organized its interventions carefully. The DOE partnership confronts the readiness gap so apparent in freshmen transitioning from public schools; ASAP and START address the crucial first-year experience, with a focus on improving or avoiding developmental education; and the New Community College offers a model of accelerated learning that structures the

CUNY AND THE BUSINESS SECTOR

What students at community colleges want is not simply to graduate, but to move on to jobs and rewarding careers. CUNY has been innovative on this front as well. Two years ago, Chancellor Goldstein called in John Clark, a former SUNY chancellor and longtime higher ed manager, to take charge of a new office that would build relationships with large employers on a university-wide basis. The Office of Business and Industry Relations leverages CUNY’s enormous student population and research talent to market CUNY and facilitate partnerships with major private and public employers.

Clark considers community college students a key asset, but one that must be marketed carefully. Employers may worry that prospective employees have weaknesses that will show up only after they start work. Internships are often the answer to that dilemma, says Clark. “Companies have cut back on in-house employee training. The way it’s done now is through internships. The intern relationship gives employers an opportunity to try our students.”

Clark’s office is seeking its own opportunities, most recently building a regional collaboration with SUNY and the states of New Jersey, Rhode Island and Pennsylvania called the Northeast Regional Community College Council to provide one-stop workforce services for large regional employers.

educational experience so that students are less likely to get lost along the way.

Interestingly, the one-year retention rate at CUNY community colleges has risen in the last two years by about three percentage points from the earlier years of this decade. This trend is promising enough to take seriously, but still too early and inconclusive to draw solid conclusions from. As the report of a CUNY working group on remediation has ruefully noted: “even if higher graduation rates do materialize, they are not likely to match the high aspirations of our students and the best intentions of faculty and administrators.”³¹

RECOMMENDATIONS

The community colleges of New York City serve a population greatly in need of higher education opportunities. Teachers at community colleges see classrooms heavily skewed toward low-income youth and adults, many of whom are also minorities, foreign-born, and reared in families unfamiliar with college. They may arrive unprepared to take full advantage of college learning and juggling college coursework with job and family obligations. CUNY administrators and faculty have shown admirable commitment and creativity in seeking to build student success at the six community colleges.

This study shows, however, that student success is not merely CUNY's business. The rate at which community colleges in New York City graduate their students has a tremendous impact on the future of those students, the productivity of the economy, revenue generation for all levels of government and the effective allocation of taxpayer dollars.

Because student success at CUNY community colleges clearly rises to the level of a public priority, we recommend that the state, city and CUNY itself consider the following recommendations:

The state should expand financial support for CUNY and SUNY community colleges. Community colleges are intended to be a low-cost alternative to four-year colleges. Over time, however, New York State has compromised this important asset by consistently slashing support to community colleges, forcing administrators to raise tuition repeatedly (CUNY's community college tuition is now \$3,600 a year for full-time, in-state students³³) and reduce staff. Lacking stable support from the state, CUNY is currently planning to raise community college tuition by another \$300 a year for each of the next five years. While the annual increases make more sense than the haphazard hikes seen in the past, the escalating tuition costs damage the accessibility of CUNY's community colleges to low-income

students, especially part-time students and single adults who are less likely to qualify for TAP benefits. The alternative would be to reduce staff further in financial aid, advising, career services and other areas that support student success, making lasting improvement in student success even more difficult. Instead of relying on CUNY to shift the financial burden to its students, the state should follow through on the commitment made during the administration of Governor Mario Cuomo to fully fund both CUNY and SUNY community colleges. In addition, CUNY should continue its efforts to streamline administrative expenses so as to provide the most cost-effective education possible for its students.

The state should consider strategies for aligning the expanded funding to state priorities. Beyond simply increasing resources for community colleges, state and city policymakers should consider funding models that reward community colleges for achieving state policy goals, particularly retaining students from semester to semester, helping low-skilled students succeed in college-level coursework, and improving the rate at which high-needs students graduate. There is justifiable concern over the perverse incentives potentially created by "performance-funding" systems. But we believe that those concerns can be addressed with the full participation of college leaders in structuring a new funding system.

The city and state should develop new funding sources to support efforts to expand and replicate projects that are succeeding in increasing community college graduation rates. CUNY is engaged in highly promising initiatives that could yield real results if replicated across the campuses and implemented at scale. These initiatives include CUNY ASAP; CUNY START; the Latino STEM Support Network at Queensborough Community College; and accelerated high school programs such as College

Now dual enrollment program and the city's 12 early college high schools.

The state and city should bring together leaders from the private sector and other education and training sectors to develop career pathways and identify gaps in college readiness and transitions. CUNY has built a strong partnership with DOE, but the state and city could facilitate much broader partnerships in building student success. For example, private-sector employers not only provide the jobs that college graduates want, they also house vital expertise on the competencies graduates should be learning. Providing opportunities for employers to work with institutions to map out realistic career pathways would be an extremely valuable service. The adult education/GED system and the workforce development system are also important to community colleges, and state policymakers can help bring them to the table. The K-12 student unit record (SUR) database currently being extended to postsecondary education by SED should be accelerated and expanded so that CUNY students can be tracked from adult education, GED instruction, and workforce training programs into community colleges.

The state should align the Student Unit Record database with the state's key employment database. To more fully document employment outcomes and provide an avenue for employer involvement, New York should follow Florida's lead and align the SUR database with the state Workforce Reporting System, which provides the state with employment data. If graduates in a particular major or college are failing to obtain jobs in their fields, policymakers and students need to know that.

The state should overhaul the Tuition Assistance Program to support student success. TAP is viewed with justifiable pride as the most generous state-level financial aid program in the country. Policymakers have good reason to support TAP's basic structure – a need-based program that, for thousands of undergraduates, makes the difference between obtaining a college

education or being denied one. But TAP is not generous to all students, nor is it well structured to support student success. Key changes that should be made to TAP include:

- Expand coverage to support summer enrollment, so that students can maintain academic momentum;
- Eliminate restrictions in part-time TAP to enable part-time students to stay in college;
- Extend TAP coverage for associate-level students who transfer to a baccalaureate program, so that they do not lose financial aid in the middle of their studies;
- Expand coverage to support early college high school;
- Equalize coverage for students on the independent schedule, which discriminates against foster youth and other adults not supported by their parents or spouses.

The state should finance TAP reforms by eliminating or restricting ineffective financial aid programs. Policymakers may well dismiss proposals to strengthen TAP because the program is already highly expensive, with a 2010 budget of more than \$900 million. But the truth is that New York State's existing financial aid system does not meet any objective test of cost-effective service to students. Additional funding to support the recommendations described above could be obtained through a mix of the following measures:

- Eliminate Aid for Part-Time Students, a well-intended but ineffective financial aid program;
- Eliminate Bundy Aid, a slush fund for private non-profit colleges and universities;
- Eliminate Graduate TAP, another laudable but ineffective financial aid program;

- Eliminate TAP aid for students who qualify using the Ability to Benefit Test, a route to college entry for students lacking a GED.

The state should support and encourage development of a statewide articulation and transfer system. Both CUNY and SUNY have recently developed systems for ensuring that community college students can transfer to four-year colleges in their respective systems without losing credit. These were vital and necessary steps to take, and CUNY in particular had to overcome considerable resistance. It will therefore sound ungrateful to ask for more, but the reality is that New York's undergraduates deserve seamless articulation and transfer statewide. A Hostos student should be able to transfer to SUNY-Stonybrook as easily as she transfers to Hunter College, and SUNY community college students should have the same assurance when entering CUNY's comprehensive colleges. A strong "2+2" articulation and transfer system would also create a platform for supporting dual enrollment and early college high school, as well as articulation between non-credit certificate programs and associate-level programs. It will almost certainly take support and encouragement from state policymakers to bring about such a match, but the rewards would be well worth the effort.

CUNY should build on its partnership with the Department of Education. Community college systems around the country could learn from CUNY's path-breaking partnership with the City Department of Education. But CUNY needs to keep pushing the envelope. Ultimately, all students who enter CUNY should have the opportunity to bring their basic skills up to college entry standards before entry. The impending transition to the Common Core Standards will provide a crucial opportunity to set a course for college readiness that at present seems far too abstract for teachers in the secondary system. Yet the Common Core Standards are not designed to dictate concrete changes in our schools. They will remain only aspirational standards unless the city uses them to drive curricular change

throughout the P-12 system. Other cities and states are breaking new ground in college readiness. In Chicago, high school graduates enter summer bridge programs before their first college semester so as to bypass developmental education. In Miami, all 11th grade students will take a college readiness assessment next year that will identify skills deficiencies in time to be addressed in their senior year. This test, developed by a cross-disciplinary team of high school and college faculty, will also be given to incoming college students.

CUNY's 12 early college high schools represent a promising opportunity to accelerate postsecondary learning. For example, students at the newly opened Pathways in Technology Early College High School (P-Tech) in Brooklyn—an innovative partnership with IBM that is now being replicated in Chicago—will stay for six years and leave with an associate's degree and hands-on experience in the working world. It is precisely this willingness to shake up the traditional educational model that may represent the future for both secondary and postsecondary education in New York City.

CUNY should expand its partnerships with employers, both private and public. CUNY is breaking new ground in partnering with the business sector—at the systems level with the Office of Business & Industry Relations' long-term courtship of large employers, and at the campus level with strategic initiatives targeting high-growth market sectors. For example, Kingsborough is building deep relationships with the hospitality industry and LaGuardia has developed special expertise in healthcare. Private-sector partnerships need to become even more widespread in the community college system, a priority made urgent by the weak labor market. Faculty should be collaborating with employers to map the skills students will need when entering their fields. This will require a high level of speed and adaptability in designing and revising curriculum to meet changing labor trends and economic conditions.

In addition, many students would benefit from the opportunity to earn certificates, especially those that require a year or more of

training. These certificate programs are short and vocationally-focused enough to be attractive to students who lack the time or preparation to go straight into a degree program, but intensive enough to provide a real career boost. CUNY's certificate offerings could be substantially ramped up, with credit awarded to students who earn certificates and move on to degree-level programs of study.

The state should develop the capacity for setting statewide priorities and goals, particularly as they relate to student success. The State Education Department (SED) oversees all higher education in New York State. But that agency's responsibility for regulatory oversight of all higher education sectors, coupled with severe underfunding and an unusual governance structure that leaves

it disconnected from budgetary decisions, prevents SED from exercising real leadership over public higher education in New York State. The Governor dominates the state's budgetary and agenda-setting role in state policy, but has no vehicle for exercising leadership in public higher education policy. While other states with a more coherent policymaking structure, such as Tennessee, Kentucky and Oregon, have made real gains in strengthening student success at their community colleges, New York lags behind. Consideration should be given to developing a statewide agenda for public higher education. The Governor should take a leadership role, with participation by SED, the State Legislature, the leadership of CUNY and SUNY, and the business community.

ENDNOTES

1. Beginning Postsecondary Students (BPS), a national study that follows high school graduates into postsecondary education. Note that CUNY's graduation rate includes all students who enter community colleges, including non-traditional students who have been out of the formal education system for a year or more. These students are less likely to graduate. In addition, BPS tracks its subjects wherever they may go, while CUNY loses contact with students who leave the CUNY system (about 12%). If the CUNY cohort were restricted to recent high school graduates and included all those who transfer out and graduate elsewhere, CUNY's graduation rate would compare even more favorably to the national average.
2. Institutional Postsecondary Educational Data System (IPEDS). For this comparison, we used four-year community college graduation rates since it was the only existing data contrasting New York City with other major cities. But IPEDS does not include part-time students or count graduations after transfer to another college. Throughout the rest of this report, we used six-year graduation data for CUNY and the nation. The six-year timetable captures the full complexity of student enrollment, transfer and completion patterns. CUNY supplied us with administrative data documenting graduation and transfer patterns at their community colleges. The six-year graduation rates for the U.S. used in this report come from the Beginning Postsecondary Students (BPS) study.
3. Of the remaining 9,600, just over 900 are pursuing a certificate. The remainder are taking credit-bearing courses, but not towards a degree.
4. While CUNY recorded 63% of its 2004 cohort as dropping out of college, it should be noted that 11.8% actually transferred out of the CUNY system. No further information is available on their outcomes, but some unknown share of these transfer students must have graduated from their new institution within six years.
5. Compiled from 2005-2009 American Community Survey, U.S. Bureau of Labor Statistics.
6. Compiled from Current Population Survey, U.S. Bureau of Labor Statistics. Data are 2010 annual averages for full-time workers ages 25 and over.
7. Ibid.
8. Carnevale, p.3
9. U.S. Census Bureau, American Community Survey.
10. Bailey points to a recent study by Philip Trostel, an academic at the University of Maine, who calculated total government spending for

college degrees, compared to the fiscal benefits associated with greater college attainment. Trostel shows that public spending on higher education actually yields savings to taxpayers over the course of a lifetime, after factoring in higher tax payments and lower government expenditures. Direct extra tax revenues from college graduates alone (roughly \$471,000 per degree over a lifetime) are more than six times the cost per degree to the government.

11. Students who drop out of community college before graduating still contribute to the economy. Indeed, individuals with “some college” earn significantly more per year than adults who lack any postsecondary education. But they clearly fall short of their potential as college grads.
12. Fernanda Santos, “College Readiness Is Lacking, City Reports Show,” *New York Times*, October 24, 2011.
13. Frank Levy and Richard Murnane, *The New Division of Labor*, Russell Sage (New York), 2004.
14. Anthony Carnevale, *Minding the Gap: Why Integrating High School with College Makes Sense and How to Do It*, Harvard Education Press, 2007.
15. Alexandria Walton Radford et al, *Persistence and Attainment of 2003-04 Beginning Postsecondary Students: After 6 Years*, National Center for Education Statistics, U.S. Department of Education, December 2010.
16. Interview with David Crook, University Director of Institutional Research, City University of New York. The New York State Education Department is completing work on a longitudinal database that will enable the tracking of students to other postsecondary institutions in New York State.
17. However, nursing graduation rates reportedly rise significantly after admission to the clinical portion of the program.
18. “Proposals to Improve Success Rates for Students in Developmental Education at CUNY: Report of the Working Group on Remediation,” CUNY Office of Academic Affairs, August 2011.
19. Budgetary data extracted from *City University of New York Budget Analysis*, 2003-04 to 2010-11, City University of New York. TAP data extracted from *Higher Education Services Corporation Annual Report*, 2001-2010, New York Higher Education Services Corporation. Budgetary levels were adjusted using the Higher Education Price Index, an inflation index designed specifically for use by institutions of higher education. See 2010 HEPI Update, Commonfund Institute, 2011.
20. We sought to clarify the data by using a subcategory of “some college no degree” called “some college but less than one year,” but the earnings levels were virtually identical.
21. Note that this does not include discount for time value of money.
22. “Do CUNY Graduates Stay in New York?,” *Policy Research Brief*, Office of Policy Research, City University of New York, undated.
23. Timothy Nadreau, Correspondence, Economic Modeling Specialists Inc. (EMSI), October 3, 2011.
24. Base operational aid is typically calculated by dividing full-time equivalent (FTE) students into the total sum of operational aid. In 2009, the city and state provided \$6,516 per FTE in base operational aid. We converted FTEs to a headcount basis to provide comparable data.
25. A part-time option has been created within TAP, but restrictive standards have limited its availability to an extremely small population.
26. The following statistics are drawn from two sources: Sandy Baum, *College Pays 2010*, College Board 2011; and Clive Belfield and Tom Bailey, *The Returns and Benefits to Community College: A Review of the Evidence*, May 2010.
27. David Cutler and Adriana Lleras-Muney, “Understanding Differences in Health Behaviors by Education,” *Journal of Health Economics*, October 2009.
28. R.A. London, “The Role of Postsecondary Education in Welfare Recipients’ Paths to Self-sufficiency,” *Journal of Higher Education*, 2006.
29. Baum op cit.
30. The goal of raising Associate degree completion overlaps with community college completion, but is not precisely the same. Roughly one-third of Associate degree students matriculate at comprehensive four-year CUNY colleges.
31. “Proposals to Improve Success Rates for Students in Developmental Education at CUNY: Report of the Working Group on Remediation,” CUNY Office of Academic Affairs, August 2011.
32. <http://cuny.edu/admissions/financial-aid/estimating-costs/tuition-fees.html>

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