

Massachusetts Community Colleges

The Potential for Improving College Attainment

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The Boston Foundation

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About the Author

Mary M. Lassen is a Senior Fellow at the Boston Foundation, focusing on issues of workforce development and higher education. Mary served as President and CEO of The Women's Union from 1994-2005 during a strategic repositioning, including the development of a bold strategic plan which emphasizes women's economic self-sufficiency, the creation of a strong public policy and advocacy capacity, and the development of a technology training and mentoring program for women. Mary served from 1984-2003 as Executive Director of the Committee for Boston Public Housing. She was a Fellow at the Mary I. Bunting Institute of Radcliffe College, and is a summa cum laude graduate of Radcliffe College. Mary serves on several boards, including as Chair of the Center for Community Change. She is a featured speaker on several topics and author of various publications.

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This report is based on extensive interviews with over 100 key stakeholders including leaders of business organizations, state officials, University of Massachusetts and state college leaders, Massachusetts community college leaders and staff, City of Boston officials, and key leaders of intermediary organizations, research and policy centers, and community-based organizations. The report is also based on research about national promising practice from a review of literature and interviews with national research organizations and representatives of community colleges and community college systems in other states.

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Finally, a special thanks to Paul Grogan, President and CEO of the Boston Foundation, Terry Lane, Vice President for Program, and Mary Jo Meisner, Vice President for Communications, Community Relations, and Public Affairs, for their support during my fellowship at the Foundation and for their insight and guidance during this project. I am hopeful and confident that this report will help to inform a wide public policy debate on the importance of community colleges in the Commonwealth thanks in part to the pivotal role the Boston Foundation increasingly plays in stimulating that debate.

Mary M. Lassen

Dear Friends:

The Commonwealth of Massachusetts appears to be well positioned in the ascendant global knowledge economy. The state boasts a constellation of world renowned colleges and universities, a storied K-12 public education system recently strengthened by innovative reforms, and the fourth largest metropolitan economy in the nation that is diversified and fueled by an innovative workforce. We continue to lead the nation in college degree attainment, increasingly recognized as a key driver of economic growth.

But there are warning clouds on the horizon that require our attention and action. States and nations around the world are investing disproportionately heavily in higher education – including community colleges – to develop more skilled workforces with which to attract and retain companies and workers. There is evidence they are already succeeding. Massachusetts is the only state in the nation to have lost population in 2004 and 2005, much of that due to departures among the 20 to 34 year-old cohort so critical in the knowledge economy. While most of those departures are offset by the welcomed arrival of new immigrants, many do not possess the required training with which to thrive in the new economy. It is estimated that a third of the state's workforce is unprepared.

The Boston Foundation places a high premium on both education and workforce development as two of its three priority focuses (housing is the third). Building on the Foundation's historic support of public K-12 education, the Foundation pursues a wide range of efforts across the education "pipeline" from pre-K through grade 16 through both its grant making and public affairs. The Foundation recently successfully promoted pilot schools in the Boston Public Schools – a model since replicated in Los Angeles. In 2005, the Foundation co-sponsored the Carol R. Goldberg Seminar report, "A New Era of Higher Education-Community Partnerships: The Role and Impact of Colleges and Universities in Greater Boston Today," that documented the enormous impact of higher education on the local landscape. That report called for greater state investment in the public higher education system, among other measures, to improve the state's competitiveness positioning.

In workforce development, the Foundation plays a lead role in hosting and co-sponsoring Skillworks, a public-private partnership that has served nearly 3,000 people and in its first three years helped secure over \$30 million in new public funding for workforce programs. The Foundation is also pursuing efforts to strengthen ESOL programming through English for New Bostonians and other initiatives.

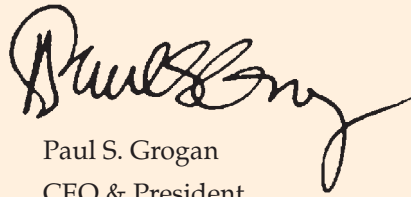
Community colleges are strategically positioned at the intersection of these two major Foundation focuses. They play a key role in both education and workforce to increase the number of students and adults with skills needed to make them competitive and to sustain a world class talent pool in Massachusetts.

Community colleges are critical components of any higher education investment or workforce development strategy. Competitor states like North Carolina have creatively invested in community colleges not only as minters of college degrees but also as conduits to well paying jobs. Unfortunately, in Massachusetts, for too long we have been complacent about public higher education, relying largely on our private research universities and colleges. We need a renewed commitment to public higher education out of recognition that those who attend public colleges and universities in the state are far more likely to stay in the state. The recent State Senate Task Force on Public Higher Education provides a clarion call for such a commitment.

It's important to note that the Commonwealth's recent success in K-12 education reform taught us that money alone does not improve a school system. We need to apply the lessons of recent successes by tying new investments to the adoption of accountability measures of student outcomes and the replication of best practices from across the country, particularly in our community college system, which is, unfortunately, underperforming.

I invite you to read this study that offers suggestions on how we can strengthen community colleges as part of a wider renewed commitment to public higher education. I also invite you to engage with us in a dialogue about how we can act upon these suggestions for the continued betterment of our Commonwealth, its students, and our workforce of tomorrow.

Sincerely,



Paul S. Grogan
CEO & President
The Boston Foundation

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Executive Summary

Massachusetts Community Colleges: The Potential for Improving College Attainment

Massachusetts has a skills shortage

The Commonwealth of Massachusetts boasts world-class economic assets and networks and a growing economy. But the state's skilled workforce exhibits disturbing trends that require a serious public policy examination and debate. A recent MassINC report shows that the Commonwealth has endured the second highest out-migration of any state in the country since 2000. There are now 75,000 unfilled jobs in the state, many of which require at least a community college certificate or Associate's degree. At the same time, there are over 170,000 people in the state unemployed. These incongruous data suggest that the state suffers from a growing jobs-skills mismatch.

This mismatch threatens to undermine the state's competitiveness positioning. In a time when states and regions are aggressively devising strategies to shore up and strengthen their skilled workforce, Massachusetts can not afford to rest on its historic laurels. While much of the state's out-migration of the past several years has been mitigated by an influx of immigrants, the number of unskilled workers overall in the Bay State is staggering.

A 2005 report by Reach Higher – a public-private partnership led by the Commonwealth to improve connections of working adults to postsecondary education – found there are 746,000 people in the state without a high school diploma or GED, and 152,000 people without adequate English language skills to be employable. A 2001 MassINC report estimated 1.1 million working age adults lack the skills necessary for success in today's high-skilled labor market.

New efforts must be made to address this skills shortage by better leveraging the resources of institutions at the intersection of education and workforce training like community colleges.

Community colleges play an important role in the talent pipeline and in eliminating the skills shortage

Community Colleges educate a significant percentage of the population, are a key part of the state's workforce development system, and help retain students after graduation. Foremost, they are a key cornerstone for improving the number of Massachusetts residents with higher education credentials (Coelen et. al. 2002):

- Many residents attend these institutions: 36% of Massachusetts high school graduates who attend college enroll in community colleges within the Commonwealth.
- 51% of all undergraduate students in Massachusetts public higher education attend community colleges.
- 37% of graduates of Boston Public Schools district and magnet high schools who attend college enroll in Massachusetts community colleges.

We expect the community college share of enrollment to increase even further. The annual number of unduplicated credit students increased 15 percent from 72,131 in FY98 to 81,412 in FY2005. Annual enrollment in non-credit workforce development courses rose even more sharply from 55,469 in FY 2000 to 70,139 in FY 2005, a 26 percent increase in five years.

Community colleges are critical to improving the skill level of the Commonwealth's adult work force. They help to ensure that more residents have access to the skills and credentials necessary for career opportunities that can support a family.

Approximately 58% of community college students in Massachusetts are adult learners over age 22 and 70,000 adult learners are taking non-credit workforce development courses. Adult basic education, ESOL, and workforce development play key roles in improving the basic literacy, English language, and workplace

skills of working-age adults. Community colleges, however, are the primary point of entry for adults to access the postsecondary skills and credentials important to both strong economic growth and family economic self sufficiency.

Notably, 75 percent of community college graduates were part of the Massachusetts workforce one year after graduation (Coelen et. al. 2002), suggesting that this pipeline continues to feed the Bay State's workforce. Moreover, at a time when only 24 percent of Massachusetts resident college students attend private four-year institutions within the state and many out-of-state college students leave after graduating, community colleges are critical to increasing the number of Massachusetts residents who have postsecondary skills and credentials.

Massachusetts community colleges have low graduation rates

The three-year graduation rate for first-time, full-time students at Massachusetts community colleges in 2005 was lower than the national average. The Massachusetts three-year graduation rate for this cohort was 17.4 percent earning a certificate or a degree during that year. This was below the national average of 21.5 percent according to the Integrated Postsecondary Education Data System (IPEDS).

It is worth noting that three-year graduation rates at Boston's two community colleges - which disproportionately serve more non-traditional age students, students with limited English proficiency, and students of color than other Massachusetts community colleges - are lower than the state average. In 2005, according to the Integrated Postsecondary Education Data System (IPEDS), Bunker Hill Community College's rate was 13% and Roxbury Community College's rate was 5%. In 2004, both schools had a 6% graduation rate. At a December 2006 address to the Boston Chamber of Commerce, Mayor Thomas M. Menino decried these low rates to key members of the business and civic community.

It is also worth noting that a six-year graduation rate is an even more accurate measure of the community college certificate or degree attainment. Nationally, six-year graduation rates are roughly double the three-

year rates. For example, in Massachusetts the three year graduation rate for the 1998 cohort is 16.8 percent, but 30.1 percent of the cohort graduated at their initial institution in six years. When degrees earned in other institutions are counted, 37 percent of the 1998 graduation rate cohort earned a degree. Unfortunately, current data on Massachusetts' community college's six-year graduation rate are not readily available.

There appear to be several contributing factors to these low rates across both three and six-year intervals. Many entering high school graduates find difficulty transitioning to college level work because they lack college-level skills and have to take non-credit developmental courses. Many community college students are unable to complete degree programs within three years because they attend part-time. Inadequate resources for academic support services and counseling contributes significantly to low first year retention and, as a result, graduation rates. Lack of a robust dual enrollment program is a particular obstacle in Massachusetts.

Limited state funding also appears to have had a negative effect. Massachusetts had the largest decrease in public higher education funding in the nation from 2001-2004. Although enrollment increased 10 percent, it is the only state in the country that is spending less for public higher education overall than it did 10 years ago.

Moreover, tuition and fees have risen sharply in response to reductions in state spending combined with increased enrollment, discouraging students from attending and completing community college. A 40% rise in community college tuition and fees as a percent of state median income from 2001-2005 has made community colleges significantly less affordable for students who depend on them for the most affordable access point to higher education.

The distinctiveness of various groups of students needs to be factored into an analysis of graduation rates

This report focuses on ways to improve graduation rates by examining promising practice strategies to support attainment of college degrees for different types of students.

It is important to look at the success rates for traditional-age students (age 18-22) and adults (over age 22) separately. Institution-wide graduation rates conceal the fact that there are vast differences in the graduation outcomes for different groupings of traditional-age students. (Adelman 2005) These groups have different objectives and different educational trajectories.

Nationally, thirty percent of 18-24 year-olds who began community college earned an Associate's degree or higher in six years, more than double the 13 percent degree attainment rate of students who entered at age 25 or higher.

Traditional-age students

Examining *national* research, Adelman has identified three distinct groups of first-time traditional-age community college students: Tenants, Homeowners, and Visitors. Tenants are students who earn 30 or more community college credits but **earn less than 60 percent** of their total college credits from community colleges. Homeowners are students who earn 30 or more community college credits and **earn more than 60 percent** of their total college credits from community colleges. Visitors are defined as students who earn fewer than 30 community college credits. These three groups have dramatically different graduation outcomes (Adelman 2005).

- *Tenants*: Approximately 18 percent of these community college students are on a strong trajectory to transfer to four-year institutions and earn bachelor's degree: **81 percent of students in this group graduate.**
- *Homeowners*: Approximately 37 percent of these students are on a trajectory toward earning terminal Associate's degree: 45 percent of the students in this group graduate, mostly with an Associate's degree as their highest credential.
- *Visitors*: Almost half (45 percent) of incoming first-year students are on a trajectory to leave community colleges during the first year without a degree or certificate: only 9 percent of the students in this group graduate.

There are four indicators that are strongly related to success between and within groups: 1) completing Algebra 2 or higher in high school, 2) earning at least 20 college-level credits in the first calendar year (taking non-credit developmental education courses is a major obstacle to reaching this threshold), 3) earning at least four college credits in summer sessions, and 4) earning credits in college-level math during the first year.

Adult students

There are two different groups of adult learners: adults with a high school education or less, and adults with some higher education or a degree. Students in both groups attend community colleges for a range of reasons and have diverse goals.

- Many adults with a high school education or less enter community college through pre-college non-credit programs. Some seek occupational certificates or Associate's degrees, but many attend to improve basic skills, English language proficiency, or specific occupational skills. Very few earn a certificate of one year or more or Associate's degree.
- Many adults who have attended college or earned a postsecondary degree attend community colleges in order to gain specific skills, earn short-term certificates necessary for career advancement, or develop skills for new careers.

There has been a significant decline in the percentage of Massachusetts community college students who are adult learners. The percentage of students aged 22 or older dropped from 70 percent in 1995 to 58 percent in 2005.

Research shows that completing at least one full year in community college and earning at least a certificate of one year or more is a threshold for economic self-sufficiency for adults with a high school education or less. There is an emerging understanding of practices that can help more adults achieve their educational and career goals.

National promising practices to improve graduation rates

Community colleges, community college systems, and states are developing and testing promising practices to improve results at the community college level for both types of students. These include:

Institutional teaching and learning practices to improve rates:

- Intensive accelerated learning such as the Community College of Denver's accelerated human services GED lab, accelerated developmental education labs and CNA to LPN career pathway.
- Career pathways such as the Portland (Oregon) Community College career pathways from adult basic education, ESOL, and workforce development entry points to occupational and technical degree programs.

Promising practices for collaboration with education and workforce feeder systems:

- Enhanced dual enrollment such as College Now in New York City that enables students with limited access to higher education to earn college credits while still in high school.
- Early college high schools that restructure high school to enable students to earn a high school diploma and an Associate's degree or two years of college credit within five years.

Promising practices for state policies and governance include:

- High quality centralized community college governance by states or regions.
- Inter-school integration to facilitate transfers.
- Interagency integration of community colleges, P-12 education, and workforce feeder systems in states (examples include Kentucky and Oregon).
- Statewide commitment to encouraging dual enrollment, as in Maryland.

Recommendations

State government, business, and civic leaders should make strengthening community colleges a priority as part of a wider commitment to invest in public higher education like that advanced by the 2005 Senate Task Force on Public Higher Education. In an economy that increasingly relies on talent, Massachusetts needs a first rate public higher education system to complement its constellation of private higher education institutions to attract and retain a skilled workforce and address a growing skills shortage. Community colleges serve as a bridge between the education and workforce development systems and better prepare the Commonwealth's workers for jobs.

Massachusetts is under-funding its higher education system to its economic peril, and saddling students with unaffordable fees. But contingent on proposals for more funding and fee restructuring should be the strengthening of performance accountability systems and the application of promising practices from around the country that apply innovative and partnership-based solutions to vexing college degree attainment challenges. In considering ways to upgrade community colleges as part of a wider commitment to strengthening higher education, leaders should keep in mind the lessons learned from the Commonwealth's recent success in strengthening K-12 systems. In 1993, many naysayers openly scoffed at the notion that K-12 public schools could be improved in part by instituting new measurement systems (e.g. MCAS) to inform strategies and track progress. While reform of this system remains in progress, K-12 public schools in Massachusetts have improved largely because of innovative strategies rooted in measurement and a widespread commitment from stakeholders both inside and outside of the system to lend their expertise and provide increased financial support.

Massachusetts needs a similar commitment from leaders across sectors to strengthen the community college system. Specifically, state government leaders should:

1. **Strengthen performance accountability systems.** Put more simply, get better data on graduation rates at community colleges and use that data to inform improvement strategies and investments. It is unacceptable for Massachusetts community colleges to have one of the lowest 3-year graduation rates for first-time, full-time students in the nation. We

should be leading the nation, not lagging it. There are several promising approaches by which to remedy this, some of which are outlined below, but all remedial strategies should be guided by available and accurate data. Unfortunately, Massachusetts does not have good data on graduation rates for both traditional-age and adult students in as full and readily accessible a format as in other states like California.

The Commonwealth's recent education reform successes at the K-12 level demonstrate how progress can be made with the introduction and use of new performance measurements like the MCAS exam. Creating an effective accountability system provides a foundation for a clear focus on getting better results, identifying the reasons for less than optimal performance on key measures, and developing strategic initiatives to improve performance. An accountability system should be developed that provides results-based benchmarks for key outcome measures for college attainment of traditional-age and adult community college students through data transparency and/or performance expectations. Specifically, performance should measure three-year, six-year and transfer graduation rates to allow for tailored reform strategies.

2. **Develop a specific action plan** by which the 3-year and 6-year college degree attainment rates for the system should be improved so that by 2012 Massachusetts is higher than the national average. State funding should also be increased annually with a meaningful percentage of new revenues linked to a new Community College Improvement Fund that makes strategic investments to improve student attainment by funding proposals to improve key attainment measures by implementing promising practices.
3. **Better align community colleges with feeder systems**, such as community-based ESOL/ABE programs and college prep curricula, with curricula at area community colleges to improve outcomes for nontraditional students.
4. **Craft population-specific strategies** that recognize the distinctiveness of various groups of community college students that are tailored to improve the pipeline from high school to college graduation. Strategies might include efforts to:

- a) Enable more students in the Homeowners group to attain the academic goals, academic impetus, and graduation outcomes of Tenants
 - b) Dramatically decrease the number of beginning traditional-age students who become Visitors and leave during their first year without a credential.
 - c) Implement accelerated developmental education, comprehensive academic and personal support services, case management, and occupational and career counseling in order to increase the graduation rate of Homeowners seeking terminal Associate's degrees.
 - d) Develop strategies to help more adults graduate. These include transitions from non-credit adult basic education, ESOL, workforce development, and developmental education to credit-level occupational programs, intensive accelerated learning, career ladder pathways, modular certificate and degree programs, teaching contextualized basic skills and English language proficiency within occupational programs, and transparent connections between education attainment and career advancement
5. **Foster collaborations between community colleges and P-12 education systems** that target improvement in key areas linked to high attainment that can be affected by P-12 and community college practices. Encourage students to:
- a) Complete Algebra 2 or higher in high school.
 - b) Have strong motivation to attain a degree.
 - c) Enroll directly in college after high school graduation.
 - d) Complete 20 or more credits in the first year in community college.
 - e) Complete 4 or more college-level credits in summer sessions.
 - f) Complete college-level math credits during the first year in college.
 - g) Access financial aid.

-
6. **Replicate national promising practices**, when applicable and appropriate. These include promising practices in:
- a) Institutional teaching and learning such as intensive accelerated learning and career pathways programs.
 - b) Collaboration with education and workforce feeder systems on programs like dual enrollment. While the law allows dual enrollment in Massachusetts, it has not been funded since 2003. There is interest from some community colleges, some Boston high schools, and the Board of Higher Education in expanding dual enrollment.
 - c) Updating governance systems. Several states have high quality centralized community college governance (e.g. Washington, Oregon, and Kentucky) or regional systems (e.g. Miami-Dade Community College in Florida and Maricopa Community College in Arizona). One relevant example of a shift toward more effective central governance of higher education in Massachusetts was the reorganization of the UMass system as a result of the Saxon Commission report (1989). Other states have successfully promoted inter-school integration to facilitate transfers. Vermont has a policy that all grades earned from any institution of public higher education appear on a single transcript and count toward the student's final grade point average. Massachusetts could gain by implementing practices such as these as well as by moving forward with current plans to refine its data collection efforts to more accurately track transfers.

Philanthropic organizations like the Boston Foundation should also provide more resources for demonstration projects to implement targeted practices. Examples include linking small high schools to community colleges; incorporating community colleges in high school reform; dual enrollment for urban high school students; middle college and early college high schools; transitions between community colleges and education and workforce feeder systems; and implementing and scaling up promising practices for teaching and learning. Local foundations could also partner with national funders such as the Lumina Foundation, whose *Achieving the Dream* initiative promotes and facilitates better use of data and helps

track cohorts of students to improve student outcomes. Moreover, business and civic leaders need to raise awareness about the important role of community colleges in addressing skills shortages and feeding the workforce overall. They should explore ways to strengthen workforce development partnerships with community college in a mutually beneficial manner.

1. Introduction

Massachusetts has a skills shortage

There are approximately 75,000 unfilled jobs in Massachusetts, many of which require at least a community college certificate or Associate's degree. At the same time, there are 170,000 people out of work; 746,000 people without a high school diploma or GED; and 152,000 people without adequate English language skills to be employable. This is a critical problem where there is virtually no labor force growth except for the foreign-born and where more than half of the people leaving the state are middle class families (Massachusetts Senate 2005).

A recent report prepared for CEOs for Cities found that "educational levels were the single biggest driver of economic growth, but high school degrees were not enough." For each 2 percent growth in the proportion of college graduates, the report found that income grew in cities by 1 percent (CEOs for Cities 2004). Massachusetts community colleges have the potential to play a critical role in increasing college attainment in Massachusetts, including dramatically improving two-year and four-year college graduation rates for 9th graders in the Boston Public Schools system.

Moreover, community colleges stand to play a key role in improving the skill level of the Massachusetts workforce and output of the economy overall. They have the potential to improve workforce skill attainment to enable all Boston and Massachusetts residents – especially those without a high school diploma and/or adequate English skills – to have access to improved opportunities that provide an income sufficient to support a family at the self-sufficiency standard.

Community colleges play a key role in undergraduate higher education in Massachusetts and the state's workforce

Community colleges are strategically positioned in the education and workforce pipelines to play a key role in creating a world class talent pool for the Greater Boston and Massachusetts economies. There are six

community colleges that provide substantial programming within the Greater Boston Area: Bunker Hill Community College, Mass Bay Community College, Massasoit Community College, Middlesex Community College, North Shore Community College, and Roxbury Community College.

Community colleges serve a broad range of student populations pursuing many different goals, from traditional-age high school graduates seeking college degrees to adult students with a high school education or less that have many different skill levels and pursue a variety of educational and occupational goals. The report of the Commission appointed by U.S. Secretary of Education Margaret Spellings entitled "A Test of Leadership: Charting the Future of U.S. Higher Education" points to the critical role of community colleges for the country. Of the nation's nearly 14 million undergraduates, more than four in ten attend two-year community colleges (U.S. Department of Education 2006). Public two-year colleges have a dual mission focus on credentialed post-secondary education and workforce development.

The role of community colleges in Massachusetts is significant:

- More than one-third (36 percent) of all 1996 Massachusetts high school graduates who enrolled in college began in Massachusetts community colleges. This is a larger percentage than began in private four-year colleges within the state, or in Massachusetts public four-year colleges, or in four-year colleges out of the state (Massachusetts Senate 2005).
- Students who transferred from Massachusetts community colleges made up more than 9 percent of 2000-01 enrollment in Massachusetts public four-year colleges and almost 4 percent of enrollment in private four-year colleges (Massachusetts Senate 2005).
- While many out-of-state students who come to Massachusetts to attend college leave after they graduate, 75 percent of community college graduates were part of the Massachusetts workforce one year after graduation (Coelen et. al. 2002).

- 37.4 percent of 2004 BPS graduates from district and magnet high schools that enrolled in higher education attended community colleges and 53.3 percent attended four-year colleges. Only 5.3 percent of exam school graduates that attended college went to community colleges and 94.2 percent went to four-year colleges (Northeastern University Center for Labor Market Studies). These numbers suggest that community colleges are likely to play an even more important role if the high school graduation and college enrollment rates of district and magnet high schools improve.

The role of community colleges in strengthening family economic self-sufficiency

Associate’s degrees and community college certificates of one year or more are a gatekeeper for many well-paying career jobs that can support a family in the high-cost Massachusetts environment. Attending college without earning a credential has significantly less impact on earnings.

- Women with an Associate’s Degree from a community college make on average 47% more than women with only a high school diploma, and the gain for men is 30% (U.S. Census).

- In 2004, high school graduates over 25 years of age earned an average of \$30,610 while those with Associate’s Degrees earned \$37,480 (U.S. Census).

- Students 25 years or older who entered Washington state community colleges in 1996-97 or 1997-98 at an ESOL level and earned no college credits earned \$16,835 after five years; students who earned a certificate of one year or more earned \$25,673. Students who entered at adult basic education or GED levels and earned no college credits earned \$13,795 five years later while those who earned a certificate of one year or more earned \$25,312 (Prince and Jenkins).

Community college mission and goals

Community colleges serve a much larger proportion of adults students over age 24 and a much smaller percentage of traditional-age students than four-year institutions. A large portion of the adult students attending community colleges did not finish high school and enter the colleges through non-credit adult basic education, ESOL, GED and workforce programs. There has been a significant decline in the percentage of Massachusetts community college students who are age 22 or older from 70 percent in 1995 to 58 percent in 2005. During this period, the number of students under age 22 increased 63 percent while the number 22 and

TABLE 1

Community College Missions and Student Goals

Community College Roles and Functions	Student Goals
Open admission	Associate’s degrees
Associate’s degrees	Certificates
Certificates	Transfer to four-year institutions
Career training	Supplement four-year program of study
Specialized workforce development	Developmental education
Adult Basic Education	Job skills – one or two courses
Developmental Education	Basic academic skills
English as a Second Language	English language proficiency
Community Service/Outreach	Personal enrichment
Personal enrichment-lifelong learning	

(Community College: Mission, Students, and Degree Completion)

older fell 1 percent. Minority students (65 percent) and women students (62 percent) are more likely to be non-traditional age (MA Board of Higher Education 2006d).

Massachusetts community colleges have low graduation rates

Improving education and workforce pipeline outcomes will require change to improve retention and graduation rates for both traditional-age and adult students.

- National community college graduation rates are significantly lower than those of four-year institutions: 30 percent of community college students earn an Associate's degree or higher compared to 69 percent of students who begin at four-year colleges, almost all of whom completed a Bachelor's degree or higher.

The three-year graduation rate for first-time, full-time students at Massachusetts community colleges in 2005 was lower than the national average. The Massachusetts three-year graduation rate for this cohort was 17.4 percent earning a certificate or a degree during that year. This was below the national average of 21.5 percent according to the Integrated Postsecondary Education Data System (IPEDS).

A six-year graduation rate is an even more accurate measure of the community college certificate or degree attainment. Nationally, six-year graduation rates are roughly double the three-year rates. For example, in Massachusetts the three year graduation rate for the 1998 cohort is 16.8 percent, but 30.1 percent of the cohort graduated at their initial institution in six years. When degrees earned in other institutions are counted, 37 percent of the 1998 graduation rate cohort earned a degree. Unfortunately, current data on Massachusetts' community college's six-year graduation rate are not readily available.

The difference in graduation outcomes between community colleges and four-year institutions is to a large extent related to differences in the student populations that they serve. On average community college students are older; less likely to have taken a rigorous high school curriculum or enter college directly after high school graduation; and more likely to attend part-time, work full-time, support themselves, and have dependents. Nonetheless, significantly increasing the

college graduation rate of 9th graders will require dramatic improvement in the graduation outcomes of community colleges in which a significant number of graduates enroll. This is a pipeline issue that requires improvement in both community college practice and P-12 effectiveness. More BPS graduates have to be better prepared for college and be more motivated to complete a degree. Community colleges need to improve retention and graduation outcomes.

More fully realizing the potential of community colleges to improve education and workforce pipeline outcomes will require change in community colleges, change in education and workforce feeder systems, and more effective connections between community colleges and feeder systems, which operate in separate "silos" and are often in competition with one another for public funding.

Given the broad range of community college missions, student populations, and student goals this report takes a mission- and population-specific approach in analyzing outcomes for traditional-age degree-seeking students and adult students with a high school education or less. The focus is on examining the current state of pipeline outcomes, identifying high leverage strategies to improve community college outcomes and the role community colleges play in improving P-16 pipeline outcomes, and identifying a range of options for helping to improve education and workforce pipeline outcomes.

2.

Student Populations in Community Colleges and a Targeted Approach to Improvement

This section of the report provides a national overview of the student populations that community colleges serve and looks at national data about the characteristics of student populations served by community colleges and four-year institutions. It also identifies a number of different population groups of traditional-age and adult community college students and assesses how and why they have very different outcomes. This provides a framework for understanding the unique role of community colleges in higher education, the barriers that many community college students face, and identifying effective improvement strategies for community colleges in Massachusetts.

Student populations served by community colleges

National data show that the majority of students that attend community colleges are different from the majority of students in four-year colleges in ways that are predictive of retention and graduation outcomes.¹ Many of the traditional-age and adult students that community colleges serve would not otherwise have access to postsecondary education.

Four-year colleges have a unified mission, preparing students for a Bachelor’s degree, and serve a relatively homogeneous student body with a common aspiration: getting a B.A. In contrast, community colleges are comprehensive institutions that serve multiple missions; provide a broad range services; and serve a variety of traditional-age and adult students who come to the college to achieve many different goals. Many students do not attend community colleges with the clear purpose of getting a degree, including a significant portion of “degree-seeking” students (Horn and Griffith 2005).

When compared to beginning traditional-age students in four-year institutions, a larger percentage of traditional-age students that begin in community colleges graduated from high school at older ages, come from families of lower socioeconomic status, and are less well-prepared by high school for college success. Completing Algebra 2 in high school and earning college level math credits during the first year is a key indicator of postsecondary graduation (Adelman 2005).

- Nearly three times as many four-year students studied more than Algebra 2 –the gateway to college-level math – in high school and had already completed some college-level math (Adelman 2005).

TABLE 2

Initial Enrollment of Traditional-Age Students

	% who enroll in 2-year public	% who enroll in 4-year
Graduate HS under age 18	29	71
Graduate HS age 20 and higher	56	39
Highest SES quintile	20	78
Lowest SES quintile	55	32
Highest HS academic intensity quintile	89	10
Lowest HS academic intensity quintile	20	65
Studied more than Algebra 2 in HS	20	58
Studied less than Algebra 2 in HS	44	11

(Adelman 2005)

TABLE 3

Initial Enrollment of Traditional-Age Students

	% who enroll in 2-year public	% who enroll in 4-year
Graduate HS under age 18	29	71
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Highest SES quintile	20	78
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Highest HS academic intensity quintile	89	10
Lowest HS academic intensity quintile	20	65
Studied more than Algebra 2 in HS	20	58
Studied less than Algebra 2 in HS	44	11

(Horn and Griffith 2006)

- More than four times as many community college students studied less than Algebra 2 in high school and were not prepared to enter college-level math courses (Adelman 2005).

Another national study (Horn and Griffith 2006) shows that community colleges serve fewer traditional-age students and more adults than four-year colleges; more financially independent students who work to support themselves and fewer “dependent” students who are supported by their parent(s); more students who attend part-time and intermittently and fewer students who exclusively attend full-time for the full year; and more students who see themselves as employees who are enrolled in school rather than as students who work to pay for college.

This analysis provides a framework for a targeted approach to developing improvement strategies that address the particular needs of diverse student populations.

National community college research has identified a number of factors that occur in P-12 education and during college that are predictive of high retention and degree completion (MA Department of Education 2006c). These P-12 and college experiences and behaviors provide insights into actionable changes in community college and P-12 practices that have potential to improve pipeline outcomes. They also provide a framework for developing more effective improvement strategies that are targeted to the particular needs of diverse student populations

TABLE 4

Individual Factors Related to Degree Completion

Prior to College

- Academic intensity of high school curriculum, especially Algebra 2
- Immediate or delayed entry to college after high school

Personal

- Socioeconomic status
- Education level of parents
- Amount of financial need met by financial aid
- Personal goals and expectations

At College

- College-level mathematics
- Continuous enrollment
- Part-time or full-time
- Hours working, especially the first year
- Completion of gateway courses
- Courses dropped without penalty after add/drop period

(MA Department of Education 2006c)

Institutional college-wide graduation rates conceal important differences in graduation outcomes for different student populations. This makes it difficult to strategically identify where change is needed and what changes will have a significant impact on improving graduation rates. The most fundamental

TABLE 5

National Data on Highest Six-Year Educational Attainment of Beginning Community College Students

Age	Certificate	Associate's Degree	Bachelor's Degree or Higher	Transfer No Degree	Enrolled No Outcome	No Longer Enrolled
18-24	8	17	13	14	9	39
25 or higher	17	11	2	4	6	60

(Prince and Jenkins 2005)

difference is between traditional-age students, many of whom are seeking a degree, and nontraditional adult students, particularly those with a high school diploma or less. Nationally, traditional-age students are significantly more likely to graduate with an Associate's degree or higher within six years than adults who begin college 25 or older, many of whom do not attend in order to get a degree. Adult students, however, are twice as likely to earn a certificate (Table 5).

- 30 percent of 18-24 year-old beginning community college students earned an Associate's degree or higher in six years, more than double the 13 percent degree attainment rate of students who entered at 25 or higher.
- 60 percent of students who entered at 25 or higher left college within six years without a certificate or degree compared to 39 percent of 18-24 year-old beginning students.

Assessment of the need and opportunities for change strategies to improve education and workforce outcomes need to be grounded in the context of specific key student populations. This report focuses on population-specific analysis of five student populations that have dramatically different characteristics and graduation

outcomes. There are three different groups of traditional-age students and two groups of adult students.

- Traditional-age students who are academically well prepared and highly motivated to transfer to four-year colleges and earn bachelor's degrees;
- Traditional-age students who are somewhat less well prepared academically and who do not transfer to four-year colleges and seek Associate's degrees;
- Traditional-age students who, for a variety of reasons, do not earn a full year of college credits and leave without credentials;
- Adult students that have a high school education or less and attend college for diverse reasons, many of whom enter through adult basic education, ESOL, workforce development, or developmental education programs; and
- Adults with a high school diploma or postsecondary education who attend for diverse purposes, many of whom are seeking to improve particular skills rather than earn credentials.

TABLE 6

Highest Credentials Attained by Homeowners, Tenants, and Visitors

	Tenants 18% of students	Homeowners 37% of students	Visitors 45% of students
Bachelor's degree or higher	77	7	5
Associate's degree	4	38	2
Certificate	2	9	5
None	17	47	89

(Adelman 2005)

Groupings of traditional-age students

As part of a *national* analysis, Adelman (2005) identified three different groups of traditional-age community college students that have significantly different characteristics and experiences before college and in college. These differences lead to dramatically different graduation outcomes, ranging from 81 percent for one group to 7 percent for another (see **Table 6**). Population-specific analysis of these three groupings suggests targeted improvement strategies that provide leverage for increasing graduation rates.

- The first group, which Adelman calls Tenants, makes up 18 percent of incoming traditional-age students and 42 percent of community college students that earn degrees. This group is defined by 1) earning 30 or more community college credits and 2) earning less than 60 percent of their total college credits from community colleges. On average, they earned 135 college credits: 57 credits from community colleges and 78 credits from four-year institutions. This group has a strong commitment to transferring to four-year colleges and earning a bachelor's degree. Approximately 81 percent of them graduate with a degree, 77 percent with a bachelor's degree and 4 percent with an Associate's degree. This is a higher graduation rate than students who begin in four-year institutions.
- The second group, which Adelman calls Homeowners, makes up 37 percent of incoming-traditional age students and 48 percent of students who earn a degree. This group is defined by 1) earning at least 30 community college credits and 2) earning more than 60 percent of their total credits from community colleges. They earned an average of 74 college credits, slightly more than two full years of study; 65 of the credits were from community colleges and 9 credits were from four-year colleges. Students in this group attend community colleges primarily to earn an Associate's degree rather than to transfer to four-year institutions. Approximately 45 percent graduate with a degree, 38 percent with an Associate's degree and 7 percent with a bachelor's degree.
- The third group, which Adelman calls Visitors, makes up 45 percent of the students but only 9 percent of those who graduate. They are defined by earning at least 1 but less than 30 community college credits. Overall, they only earned an average

of 25 college credits, less than one full year of study: 14 credits from community colleges and 11 from four-year colleges. Only 7 percent of this group graduate with a degree, 5 percent with a bachelor's degree and 2 percent with an Associate's degree. It is widely recognized that approximately half of first-time community college students leave during the first year without a degree. Dramatically increasing the graduation rates of Visitors is the key challenge and opportunity to increase the number of beginning community college students that graduate with degrees.

Understanding the differences in the experiences and behaviors of these three groups in P-12 education and in their first year of community college sheds important light on factors that increase or decrease the likelihood of graduation. By doing so, they provide insights into focused strategies both before and during college to improve postsecondary education graduation outcomes. This population-specific outcomes analysis identified three areas for pipeline improvement:

- Enabling more students in the Homeowners group to attain the academic goals, academic impetus, and graduation outcomes of Tenants.
- Implementing community college promising practices in areas such as accelerated developmental education, comprehensive academic and personal support services, case management, and occupational and career counseling in order to increase the graduation rate of Homeowners seeking terminal Associate's degrees.
- Dramatically decreasing the number of beginning traditional-age students who become Visitors that leave during their first year without a credential and significantly increasing first-year retention should be at the heart of strategies to improve graduation outcomes.

Table 7 shows key characteristics of the three groups that contribute to the reasons why 81 percent of Tenants, 45 percent of Homeowners, and 7 percent of Visitors earn a degree. The focus is on behaviors and experiences that are linked to college achievement that high schools and community college can significantly impact. These are pipeline issues that require changes in P-12 education and community colleges as well as

TABLE 7

Characteristics of Homeowners, Tenants, and Visitors

	Homeowners 37% of students	Tenants 18% of students	Visitors 45% of students
Highest 2 SES quintiles	38	58	39
Lowest 2 SES quintiles	36	22	35
Highest 2 Academic Resources quintiles	19	36	14
Lowest 2 Academic Resources quintiles	52	31	63
Higher than Algebra 2 in HS	16	35	11
Lower than Algebra 2 in HS	46	29	55
Enter PSE directly after HS	79	92	64
Earned college-level math credits 1st calendar year	23	43	7
Earned 0-10 credits in 1st calendar year	21	10	64
Earned 20 or more credits in 1st calendar year	49	64	9
No credits earned in summer sessions	39	18	70
More than 4 credits in summer sessions	47	67	18
Continuous enrollment	63	84	35
1-10% withdrawn or repeated courses	36	54	16
20% or more withdrawn or repeated courses	22	8	44

(Adelman 2005)

improved collaboration and transitions between the two systems.

Tenants, who have by far the highest graduation rate, come from higher socioeconomic backgrounds than the other two groups and had access to greater academic resources in P-12 education. But the large gap between the 45 percent graduation rate of Homeowners and the 7 percent rate of Visitors cannot be explained either by socioeconomic background or by academic resources in high school. Table 7 indicates seven leverage points for increasing graduation outcomes through changes in high schools and community colleges as well as collaboration between the two:

- **Increase the number of students who complete more than Algebra 2 in high school** and reduce the number who complete less than Algebra 2. There is a significant gap that differentiates Tenants from Homeowners.
- **Increase the number of high school students who directly enter community colleges** in the fall after they graduate. This is linked to improvements in high school counseling and community college outreach. There is a significant gap that differentiates Tenants from Homeowners.
- **Increase the number of community college students who earn college-level math credits** during the first calendar year. This is linked to increasing the number of students who complete more than Algebra 2 in high school and to improved community college counseling, advising, developmental education, and academic support services. There are significant gaps that separate Tenants from Homeowners and Homeowners from Visitors.
- **Increase the number of community college students who earn 20 or more credits during the first calendar year** and decrease the number who earn 10 credits or less. There is a significant gap that separates Tenants from Homeowners and even larger gap that separates Homeowners from Visitors. More effective and accelerated developmental education for students who lack skills for credit-level courses is an important lever for enabling more students to reach this threshold.
- **Increase the number of community college students who earn more than four credits in summer sessions** and reduce the number who do not earn any credits. There are significant gaps that separate Tenants from Homeowners and Homeowners from Visitors.

- **Reduce the number of community college students who withdraw from or repeat 20 percent or more of their courses.** There are significant gaps that separate Tenants from Homeowners and Homeowners from Visitors.

Change strategies and benchmarks of progress should focus on improvements in these areas that are indicators of retention and graduation for students who begin higher education in community colleges.

Adults with a high school education or less

Community colleges are the primary postsecondary institution serving adults and people with pre-college literacy and English language proficiency skills. Adult learners over age 24 make up 44 percent of community college students in the U.S. and many adults enter community colleges through noncredit pre-college programs.

There is a clear need to improve graduation rates for adult community college students. Nationally, only 13 percent of students age 25 or older earn an Associate’s or Bachelor’s degree within six years compared to 30 percent of entering students who were 18-24 years of age (Prince and Jenkins 2005).

A longitudinal study by Prince and Jenkins (2005) of adults aged 25 and older with a high school education or less that entered Washington State community colleges in the 1996-97 and 1997-98 cohorts highlights the importance of dramatically improving graduation

outcomes.² Three-quarters of the cohorts entered at the “Less than High School” ESOL or adult basic education levels and one-quarter entered with high school diplomas or GEDs. Overall, 35 percent started at the ESOL level, 40 percent in adult basic education, 6 percent with a GED, and 18 percent with a high diploma.

The study shows that graduation outcomes for adults who enter with a high school education or less are significantly below the graduation rates of traditional-age degree-seeking students. It also shows a marked difference in the postsecondary retention and graduation outcomes of adults without a high school credential and those with a high school diploma or GED (Prince and Jenkins 2005).

- 87 percent of the adult students who entered through ESOL programs and 61 percent who entered through adult basic education or GED programs did not earn any college-level credits within five years. In comparison, only 13 percent of students who began with a GED and 11 percent who began with a high school diploma did not earn any college credits.
- Only 3 percent of beginning ESOL-level adult students and 9 percent of beginning adult basic education students earned 10 or more college credits; 1 percent and 2 percent of them respectively earned 45 or more credits, which is equal to 1.5 years of full-time study. In comparison, 38 percent of GED enrollees and 51 percent of high school graduates earned 10 college credits or more, of whom 12 percent and 13 percent respectively earned 45 credits or more.

TABLE 8

Five-Year Highest Attainment of Adult Students with High School or Less

5-Year Attainment	ESOL	Less Than HS	GED	HS Diploma
GED	0	8	NA	NA
No college credits	87	61	13	11
Less than 10 college credits	7	16	28	19
10-44 college credits	2	7	26	32
45 or more college credits	1	2	12	13
Certificate of 1 year or more	1	2	5	6
Associate’s Degree	1	1	9	12

(Prince and Jenkins 2005)

-
- 94 percent of beginning ESOL students and 77 percent of adult basic education or GED students earned less than 10 college credits. In comparison, 41 percent of students who began with a GED and 30 percent who began with a diploma earned less than 10 college credits.
 - Only 2 percent of students who began at the ESOL and 3 percent who began at the adult basic education had earned a certificate of one year or more or an Associate's Degree within five years. In contrast, 14 percent of students who began with a GED and 18 percent who began with a high school diploma earned a certificate of one year or more or an Associate's Degree (Prince and Jenkins).

The study provides clear evidence that there is both room for and need for dramatic improvement in the number of adults who enter community colleges at the "less than high school," GED, or high school diploma level who complete at least one year of study (30 credit hours) and attain a certificate of one year or more or an Associate's Degree.

The study also demonstrates the economic value of earning at least a certificate of one year or more or an Associate's degree, particularly for students who began at the ESOL or less than high school levels. Completing 45 college credits without a credential or earning a certificate of less-than-one-year had very little impact on earnings after five years.

The findings of the study lead Prince and Jenkins to "suggest that community and technical colleges ought to make taking at least one year of college-level courses and earning a credential a minimum goal for the many low-skill adults they serve" (Prince and Jenkins 2005). Given that such an extremely small percentage of adults who entered at the ESOL, adult basic education, or GED program levels earned 30 college credits and attained a certificate or Associate's degree, progress toward this goal will require significant change in community colleges, feeder system institutions, and state policies. Yet this is an area where there is a significant need for improvement in outcomes.

3.

Community Colleges in Massachusetts

This section provides an overview of the history and current context of community colleges in Massachusetts. Areas include:

- Number and characteristics of students served
- Graduation outcomes
- Funding and student costs

History of community colleges in Massachusetts

The Massachusetts Legislature established the Massachusetts Regional Community College system in the late 1940s. With the exception of Holyoke Community College, which was founded as Holyoke Junior College with funding from the City of Holyoke, other campuses were established by the state, with several created in the mid-1960's. The 15 colleges enrolled 151,551 credit and non-credit students in FY 2005 from all parts of the state. They range from the Berkshires (Berkshire Community College) to Cape Cod (Cape Cod Community College) and cover all major urban and suburban areas in between. The additional colleges (and primary locations) are: Bristol (Fall River); Bunker Hill (Charlestown and Chelsea); Greenfield (Greenfield); Holyoke (Holyoke); Mass Bay (Wellesley, Framingham and Ashland); Massasoit (Brockton and Canton); Middlesex (Lowell and Bedford); Mount Wachusett (Gardner); North Shore (Lynn, Beverly and Danvers); Northern Essex (Haverhill and Lawrence); Quinsigamond (Worcester); Roxbury (Roxbury); and Springfield Technical (Springfield).

Until the late 1980's a statewide community college board oversaw the entire system while separate local boards governed each campus. Due to budget pressures during the third Dukakis administration, the statewide board (comparable to the University of Massachusetts Board) was abolished. Since then the 15 individual boards, with members appointed by the governor, have governed their respective campuses. The legislature provides individual line item appropriations to the campuses and there is a high level of

political involvement. The Board of Higher Education has nominal oversight but has been described by several individuals as "essentially powerless" so long as it has no budgetary leverage.

During the early 1970's faculty at Mount Wachusett and Massasoit began labor negotiations with their boards of trustees. Faculty from the other campuses joined together to form a statewide collective bargaining unit affiliated with the National Education Association. There is now a single collective bargaining agreement for all 15 colleges and approximately 2,000 full-time faculty across the state.

There have been various attempts to reform the community college system. In the early stage of Governor Romney's administration, Peter Nessen attempted to lead a major overhaul of public higher education in the Commonwealth. The proposed reorganization would have eliminated the President's office in the University of Massachusetts system, privatized several public colleges, and spun off the UMass – Amherst campus. Nessen encouraged the development of regional consortia of UMass branches, state colleges, and community colleges which would develop a coordinated regional approach to program offerings in the context of the local economy. He also envisioned mentoring relationships between institutions such as UMass Boston and Roxbury Community College. In addition, he envisioned shifting additional resources to the community colleges by closing some of the state colleges. These reforms never materialized as Governor Mitt Romney embarked upon a politically high stakes but ultimately successful campaign to oust UMass President William Bulger; Nessen ultimately resigned.

Perhaps more promising are recent regional attempts to build collaborations with the three levels of public higher education (community colleges, state colleges, and UMass). More recently this has also included involvement from the local workforce investment boards. Efforts such as Connect (in Southeastern Massachusetts) and Ed Link (on the North Shore and in the Merrimack Valley) show promise. To date, no similar initiatives exist in the Boston area.

As with the other components of the public higher education system in Massachusetts community colleges exist in the shadow of the large number of private institutions in the Commonwealth. Recent reports produced by the Senate Task Force on Higher Education and the Carol R. Goldberg Seminar have highlighted the importance of a more robust collaboration between private institutions and the public higher education system.

Current status of Massachusetts community colleges

More than half of all public undergraduate students in Massachusetts (51 percent) enrolled in community colleges while 22 percent attend state public colleges and 27 percent are enrolled in public universities (Massachusetts Board of Higher Education 2006d). There are approximately 81,000 credit students and 72,000 non-credit workforce development students attending community colleges in the Commonwealth. There has been a sharp increase in enrollment of both credit and non-credit students since 1998:

- The annual number of unduplicated credit students increased 15 percent from 72,131 in FY98 to 81,412 in FY2005. Annual enrollment in non-credit workforce development courses rose even more sharply from 55,469 in FY 2000 to 70,139 in FY 2005, a 26 percent increase in five years.
- Growth in non-credit workforce development enrollment accounted for 61 percent of the total increase in the number of credit and non-credit workforce students (Massachusetts Board of Higher Education 2005).

Six community colleges provide substantial programming within the Greater Boston Area:

- Bunker Hill Community College (Charlestown, Chelsea)
- Mass Bay Community College (Wellesley, Framingham)
- Massasoit Community College (Canton)
- Middlesex Community College (Bedford)
- North Shore Community College (Lynn)
- Roxbury Community College (Roxbury)

This section looks at the current status, performance, and outcomes of Massachusetts community colleges as a whole as well as the six colleges that serve Greater Boston.

Performance

The Massachusetts three-year graduation rate for first-time full-time students in 2005 was 17.4 percent – below the national average of 21.5 percent according to the Integrated Postsecondary Education Data System (IPEDS).

Three-year graduation rates measure the percentage of first-time, full-time students who are enrolled in degree programs and that completed a degree at their initial institution within three years. They do not include transfers into the college, transfers to other institutions, students who begin part-time, students who take more than three years to graduate, re-admitted students, or non-degree seeking students. Approximately one-third of all first-time students who enter Massachusetts community colleges are included in

TABLE 9

3-Year Graduation and First Year Retention Rates

	2004 IPEDS 3-year Graduation Rate ³	2005 IPEDS 3-year Graduation Rate	First Year Retention Rate
Bunker Hill	6	13	49
Mass Bay	14	16	50
Massasoit	14	12	55
Middlesex	15	14	54
North Shore	16	16	57
Roxbury	6	5	46
All CCs	17	17	56

MA Board of Higher Education, 2005 Performance Measurement Report

TABLE 10

Characteristics of Community College Student Populations

	Bunker Hill	Mass Bay	Massasoit	Middlesex	North Shore	Roxbury	All CCs
% GRS cohort in developmental ed ⁴	63	46	62	67	58	63	62
% GRS cohort taking ESOL courses	15	8	2	3	4	21	4
% GRS cohort 22 or older	27	15	9	7	14	51	13
% GRS cohort minority students	59	24	19	27	24	92	25

MA Board of Higher Education, 2006 Task Force on Retention and Completion Rates in Massachusetts Community Colleges

the traditional graduation rate cohort (MA Board of Higher Education 2006d).

All remedial students are included in the traditional graduation rate cohort if they are considered “degree-seeking for the purposes of federal financial aid.” Students can take up to one academic year of ESOL or developmental coursework (up to 30 credits) and still be counted as degree-seeking. “Credits” earned in developmental coursework allow students to qualify for financial aid, but they are not college-level credits that can be used toward graduation. Overall, 62 percent of the Massachusetts students in the graduation cohort were enrolled in a developmental course and 53 percent were enrolled in a developmental math course. Approximately 86 percent of students taking developmental courses were taking a developmental math course, which is required of all students that have not completed Algebra 2. Approximately 31.5 percent of total credits earned by students in the graduation cohort were developmental, which means that only two-thirds of the credits they earn count toward graduation (MA Board of Higher Education 2006b).

Approximately 4.2 percent of students in the graduation cohort were taking non-credit ESOL classes, but 15.4 percent of Bunker Hill Community College students and 20.7 percent of Roxbury Community college students took ESOL courses (MA Board of Higher Education 2006b).

Approximately 13.4 percent of all students in the Fall 2005 traditional graduation cohort were age 22 or higher, a factor that is predictive of lower graduation rates. But the numbers were significantly higher at Bunker Hill Community College, where 26.7 percent were non-traditional age, and Roxbury Community College, where 51.3 percent were 22 years or older. For the state as a whole, 25.2 percent of students in the graduation rate cohort were students of color; 59.4

percent of the Bunker Hill Community College and 92.3 percent of the Roxbury Community College cohorts were minority students (MA Board of Higher Education 2006b).

While 61 percent of all Massachusetts 10th grade students scored proficient or advanced in the Math MCAS, only 29 percent of African-American and Hispanic students were proficient or advanced in math compared to 68 percent of white students and 74 percent of Asian students (Board of Higher Education Thinking P-16, April 2006). This is a critical pipeline issue that affects large numbers of BPS 9th graders, particularly those that attend non-exam high schools, and should be a priority for collaborative efforts between the P-12 education system and community colleges.

The three-year graduation rate captures just over half of all community college students who graduate. For example, the three year graduation rate for the 1998 cohort is 16.8 percent, but 30.1 percent of the cohort graduated at their initial institution in six years. When degrees earned in other institutions are counted, 37 percent of the 1998 graduation rate cohort completed earned a degree. Essentially, only 45 percent of the students who eventually graduated were captured by the traditional three-year graduation rate and 55 percent either graduated after three years or in other institutions. The 26 percent six-year graduation rate for minority students was significantly lower than the overall rate. Full-time students graduate at a higher rate than part-time students: 26.7 percent of part-time students in the 1998 entering cohort completed a degree within six years compared to 36.9 percent of those who attended full-time (MA Board of Higher Education 2006d).

- The annual credit course completion rate has remained virtually unchanged since 1998 at 77 percent.

- The first year retention rate, which measures the percentage of new first-time, full-time degree-seeking students who return to the same institution the following fall fell slightly from 56.5 percent in Fall 2000 to 55.6 percent for the Fall-2003 cohort. Bunker Hill Community College (49.4 percent) and Roxbury Community College (46.3 percent) had the two lowest first-year retention rates in Massachusetts.
- The annual number of Associate's degrees awarded rose 13.8 percent from FY 1995-FY 2005 while the number of certificates increased 37.8 percent (MA Board of Higher Education 2005).

There is a lack of a robust dual enrollment focus that would allow students to earn college credits while they are enrolled in high school. While the law allows dual enrollment in Massachusetts, it has not been funded since 2003. There is interest from some community colleges, some Boston high schools, and the Board of Higher Education in expanding dual enrollment.

Greater attention must be paid to supporting smooth transfers for students from community colleges to bachelor's degree granting institutions. To its credit, Massachusetts is one of the few states to attach a financial incentive to transfer. The state's community college students who graduate from certain programs with a 3.0 grade average or higher are entitled to a 33 percent reduction in their tuition at a public state college or the University of Massachusetts.

Vermont has a policy that all grades earned from any institution of public higher education appear on a single transcript and count toward the student's final grade point average. Maine uses an online course equivalency system where a student can enter the courses completed at the community college level to determine how those courses could be applied to degrees at the state's four-year public institutions. California has a uniform system of course numbering which facilitates transfers. Other states have done an excellent job of developing strong systems of articulation agreements. Massachusetts could gain by implementing practices such as these as well as by moving forward with current plans to refine its data collection efforts to more accurately track transfers. Since transfer rates are increasingly an equity issue, these steps would encourage the understanding of a system of public higher education (Purcell 2006).

Funding and student costs

There has been a marked reduction in state funding for higher education that has led to a significant increase in tuition and fees. The combination of reduced public funding and higher tuition have a significant impact on the enrollment, retention, and completion of adult students who have limited ability to pay tuition and significantly less access to financial aid. Unlike many other states, Massachusetts community colleges do not receive local or county revenues.

Massachusetts is the 49th lowest state in the nation for state higher education spending as a percentage of state income and the 47th lowest in state spending per capita. Massachusetts had the largest decrease in state spending for public higher education between 2001 and 2004 out of all 50 states, a 32.6 percent reduction adjusted for inflation. It is the only state spending less on public higher education than it did 10 years ago (Massachusetts Senate Task Force on Higher Education 2005). While Massachusetts does have one of the higher spending amounts per public higher education pupil, the wider rankings remain a cause for concern.

Tuition and fees as a percent of state median family income rose sharply from FY2001-FY2005, a 40 percent increase from 3.5 percent of median income in 2001 to 4.9 percent in 2005. During that period, tuition and fees rose 57 percent while median state family income only increased 11 percent (MA Board of Higher Education 2005). Higher tuition and fees are linked to the need for students to work longer hours, which has a negative impact on retention and graduation.

Funding for public higher education increased in 2006-2007 as state revenues grew. The Governor and Legislature agreed to increase spending on higher education in 2006-2007 by \$64 million, or 7 percent, over the 2005-2006 allocation. The final budget included increases of 4 percent for community colleges, 6 percent for public four-year colleges, and 8.6 percent for the University of Massachusetts system (The Chronicle of Higher Education, Volume LIII, Number 1. August, 2006).

A recent MassInc report by Bridget Terry Long cited the high cost of college as a reason why many students who start college leave without a degree. College dropouts have the worst of both worlds. They have to repay debt from college loans, but do not have a degree that increases their earning power. The report calls for

“a renewed focus on getting students *through* college and not just *into* college ...” New England’s community colleges and private four-year colleges are more costly than the national average. If a steep decline in affordability continues it is likely that the region’s public four-year colleges will also be less affordable than the nation as a whole (Long et. al. 2006).

Unlike almost all other states, public higher education tuition revenues, including those of community colleges, are sent by the campuses to the state General Fund. As a result, there is no direct link between the tuition revenues community colleges send to the state and the amount of state funding they receive. Massachusetts community colleges rely heavily on student fees, often higher than tuition, which are used directly by campuses. Tuition levels are set by the Board of Higher Education while individual colleges set fees. In almost all other states, tuition and fees are collected and used directly by campuses (Massachusetts Senate 2005). The nearly one-third reduction in state funding took place at a time when FTE enrollment in Massachusetts community colleges increased almost 10 percent, resulting in an even larger reduction in funding per FTE (Massachusetts Board of Higher Education 2005).

Massachusetts, by law, does not provide state funding to support non-credit continuing education or workforce development programs (developmental education is considered a credit program for purposes of state funding but does not provide college-level credits toward graduation). This creates barriers for part-time and working students who are unable to participate in a regular academic schedule. A number of states including Oregon, Washington, and North Carolina provide state funds for all credit and noncredit students based on the number of full-time students enrolled. The community college system has expressed interest in moving forward with a phase-out of the law prohibiting state funding for continuing education, and the Senate Task Force has recommended changing the law and allowing community colleges to pilot a transition (Massachusetts Senate 2005).

Other Massachusetts work underway

There is a body of research, policy analysis, and data analysis underway in Massachusetts that when complete will provide important information about community colleges in Massachusetts.

Research/Policy

- Board of Higher Education Task Force on Retention and Completion Rates in Massachusetts Community Colleges (currently scheduled to present recommendations to the Board of Higher Education in February 2007).
- MassINC review of promising practices in retention and completion rates (expected completion in early 2007).
- Private Industry Council/Center for Labor Market Studies report on education and employment outcomes for Project ProTech students as well as college enrollment data for BPS graduates.
- Nellie Mae Foundation-funded ABE-To-College Transition Project (all 6 New England states).
- The New England Board of Higher Education and TERI have launched College Ready New England.

Data work

There are two efforts that will produce some information on pipeline issues. These are:

1. The Massachusetts Board of Higher Education and Massachusetts Department of Education initiative (part of a multi-state NGA effort) is working to track Massachusetts high school graduates who move on to Massachusetts 2- and 4-year public institutions. This will allow for a school by school analysis and will shed light on questions ranging from the degree to which MCAS scores predict college success and the impact of various course-taking patterns on retention.
2. The Boston PIC is working with the Center for Labor Market Studies/Northeastern University to track all BPS graduates who attend postsecondary institutions that are part of the National Student Clearinghouse program (all major Boston area colleges, with the exception of Northeastern, participate). This will provide a very detailed picture of where BPS graduates are experiencing success and where there are problems.

4.

National Promising Practice

This section identifies national promising practices for improving community colleges in three areas: 1) institutional community college practices for improving retention and completion; 2) promising practices for state policies and funding; and 3) promising practices for collaboration between community colleges and education and workforce feeder systems. The national overview of promising practices provides useful information for developing improvement strategies for community colleges in Massachusetts.

Institutional community college practices for improving retention and completion

A significant number of community college students, particularly the approximately half who leave during the first year without a credential have one or more risk factors that are indicators of low retention and graduation: many are above age 22, delayed entry to postsecondary education, attend part-time, work full-time, have families, support themselves and their families, and are not academically well-prepared for college-level programs. Dramatically increasing community college graduation rates requires practices and strategies that address these barriers.

- Community College of Denver provides *accelerated, intensified, and contextualized developmental and basic skills education* for multiple student populations. The CNA-LPN career ladder pathway enables employed adults at the lowest developmental math level (basic arithmetic) develop the skills needed to enter a college-level LPN programs in just 45 weeks, with high program completion rates. Its accelerated GED lab enables students, most of whom are TANF recipients, get a GED in four months (Liebowitz and Taylor 2004).
- Portland Community College in Oregon has created *career pathways* leading from multiple pre-college workforce development, adult basic education, ESOL, and developmental entry points to modularized college-level degree programs. Long-term degree programs are “chunked” into manageable

intensive modules that are linked to certificates and specific labor market outcomes. Programs are often competency-based open-entry open-exit formats designed for students that have to balance work and family with attending cases. Under state law, students taking short-term certificate modules linked to degree programs are eligible for financial aid. PCC’s goal is for all programs to provide access to career pathways so that all students are engaged in education that can lead to a degree (Liebowitz and Taylor 2004).

- *Student support services and case management*: Academic and personal support services have a significant impact on improving first-year retention, but they are often funded by “soft money” and only serve a portion of the students in need. Proactive occupational and career counseling and advising increase first-year retention for students who are likely to leave during the first year without a credential. Community College of Denver and Portland Community College have made counseling and support services a key element of institutional improvement strategies. Both institutions have taken promising practice strategies developed in particular programs to larger scale, moving toward institutional practice (Liebowitz and Taylor 2004).
- *Program structures: Cohort strategies and learning communities* have a significant impact on retention by providing opportunities for peer learning and study, peer support and relationships, and more effective contact between faculty and students (Liebowitz and Taylor 2004).
- *For-profit colleges*: While serving a very similar student population, for-profit two-year institutions have higher completion and graduation rates than community colleges. A key difference is that many more students at for-profit institutions attend full-time than at community colleges. For-profit institutions were the highest producer of BS degrees in engineering-related technologies for people of color and the second and third-highest for computer and information services BS degrees for African-

Americans. Key practices linked to high graduation and completion rates include (Jobs for the Future et. al. 2006):

- Accelerated time to degree completion, with shorter more intensive courses
- Focused offerings targeted to specific career needs of adults
- Standardized and centrally developed curriculum and course content
- Flexible scheduling with frequent entry and exit options
- An employment focus using counseling and placement and tracking of employment outcomes
- Hands-on practical instructional methods
- Integration of general education courses with occupational content
- Delaying general education courses until students have begun their technical program
- More faculty with industry experience and emphasis on applied learning
- Data-driven assessment of student learning and value of program to students

Promising practices for state policies and funding

- *Kentucky* promotes integration between community colleges, adult basic education, ESOL, TANF, and workforce development with the goal of increasing postsecondary enrollment and graduation. A high percentage of students dual enroll in adult basic education and developmental education (based on an assessment of their skill levels) and are taking college-level courses.
- *North Carolina* has created a clear mission and focus for community colleges as an economic development engine, which is driven by structural changes in the state economy that created the need for a significantly more highly skilled workforce. There is a focused higher education goal to increase the college-going rate in the state with particular attention to “first-generation” college students. As a result, the college-going rate increased 9 percent in 5 years. There is a \$5 million Golden Leaf Biotechnol-

ogy and Biomanufacturing Initiative based on a collaboration between NC State University, NC Central University, and 9 NC community colleges.

The College Foundation of North Carolina serves as the vehicle for a multifaceted statewide effort to increase college enrollment and graduation rates. In addition to significant media marketing and financial aid, this includes training and support 3,000 high school counselors, 500 college admissions officers, superintendents and principals, teachers, school boards, and the Governor’s Education Cabinet. College-going increased from approximately 52 percent in 1991 to almost 70 percent in 2003 (Kanoy 2006).

- *North Carolina, Oregon, and Washington* provide state funding for all credit and non-credit students based on number of full-time equivalent (FTE) students. This provides supports for non-credit pre-college programs that are the primary entry points to postsecondary education for adults with a high school education or less.
- *Oregon* has developed a governance structure that integrates community colleges and workforce development in a single state agency. Making community colleges the primary provider of adult basic education and ESOL also creates potential for integration between all three systems and provides opportunities to create pathways from pre-college entry points to college-level degree programs.
- *Maryland* is one of the states where dual enrollment, which allows high school students to co-enroll in community college courses, is designed to increase college enrollment and success for students that have traditionally low postsecondary graduation rates that are at risk of dropping out and dropout.
- *California*: At a time when community colleges across the nation faced declining revenues, the California Community Colleges negotiated the Partnership for Excellence that provided *additional funding in return for improvement* in targeted performance goals.

Promising practices for collaboration with education and workforce feeder systems

There is potential for community colleges to play roles in improving high school graduation rates, academic preparation for college, and college enrollment rates through collaborations with P-12 systems. They can also improve skill development in adult basic education, ESOL, and workforce development programs as well as advancement from pre-college programs into college through collaborations with adult education and workforce feeder systems. Promising practices include:

- Early college high schools, which are small autonomous schools where students can earn an Associate's degree or two years of college credit toward a bachelor's degree while still in high school. The focus is on serving low-income students, first-generation college goers, English language learners, and students of color. Middle college high schools are located on community college campuses and fulfill high school curriculum requirements. Middle College, located on the LaGuardia Community College campus in New York has achieved impressive results: 97 percent of students stayed in school compared to 70 percent systemwide, 87 percent graduated, and 90 percent of graduates enrolled in college (Lieberman 2004).
- With more than 2,000 high school age students, Portland Community College (PCC) is the largest high school in Portland, Oregon. PCC Prep's College Bound Program provides multiple entry points that allow out-of-school youth with as low as third grade reading and math skills to enroll in PCC's non-credit and developmental education courses that link directly to credit-level career education programs. Eighty percent of the out-of-school youth who enter the program continue their education in the program, earn a diploma or GED, return to high school, or become employed while simultaneously earning college credits (Pennington and Vargas 2004).

There are other applicable models across education systems:

- University Park Campus School (UPCS) is a grade 7 to 12 school in Worcester that was developed

through collaboration between Clark University and Worcester Public Schools around the promise to prepare every student for college. Students are chosen by lottery and the vast majority are low-income, enter the school at least two grade levels behind in math and reading, and come from homes where English is not spoken. All UPCS graduates have gone on to college, all of them the first college-attenders in their families. All UPCS students have passed state MCAS exams on their first try, with the vast majority scoring advanced or proficient. UPCS has consistently performed above the statewide average on 10th grade MCAS tests.

- College Now is a partnership between City University of New York (CUNY) and the New York Public Schools that provides free credit-bearing college courses, developmental courses, and preparation for high school state Regents exams for students in most New York City high schools. Approximately 14,000 high school students take credit-level courses in CUNY campuses, more than three-quarters of them students of color. Approximately one-third of NYC public high school students that entered CUNY in fall 2003 had participated in College Now. CUNY is also implementing 10 early college high schools designed to enable students to earn a high school diploma and an Associate's degree or two years of college credits toward a Bachelor's degree (Pennington and Vargas 2004 and Hoffman and Robins 2005).
- Community College of Denver has played an important role in citywide high school reform, including accelerated developmental education for students below grade level while they are still in high school.
- ISUS Trade and Technology Prep, a community high school in Dayton, Ohio based on the YouthBuild model, provides a program for high school dropouts that combines high school academics, college-level community college technical courses, and hands-on skills practice. Students can earn a high school diploma and college credits while advancing toward national technical certification (Pennington and Vargas 2004).

National funder initiatives

- Achieving the Dream, Lumina Foundation-led initiative focusing on removing barriers to success for underserved community college students, is working in FL, NM, NC, PA, TX, VA, WA, CT (with Nellie Mae support), and Ohio (with support from the KnowledgeWorks Foundation). Other regional funders have been engaged as partners in the expansion effort. There is a major research and policy component along with state-based efforts.
- Bridges to Opportunity, a Ford Foundation-led effort to enhance image and reputation for state policies and broaden constituency support for state policy change, is working in OH, KY, LA, CO, WA, NM, CA and IL.
- Gateway to College, a successful program for youth aged 16-20 who have dropped out of school or are in danger of doing so, is funded by the Bill and Melinda Gates Foundation and is being replicated at Mt. Wachusett Community College in 2006-2007 (planning and recruitment currently underway). Massasoit Community College is also under consideration as a site.
- MDRC's Opening Doors initiative is working with 6 community colleges serving low-income students to improve program quality and leverage institutional change as well as to mobilize constituency groups.
- The Casey Jobs Initiative works to increase employment opportunities for low-income students in New Orleans, St. Louis, Philadelphia, Seattle, and Milwaukee. Linkages to community colleges are a feature of the initiative.
- The Maine Community Foundation has partnered with the Maine Development Foundation to create the Maine Compact for Higher Education, which has developed a shared vision of college as the right and responsibility of all Maine residents. The Compact has started to publish an annual report on indicators of higher education attainment. In addition, they have developed four action strategies:
 - Increase financial aid to improve access to and persistence in college for low income students.
 - Provide early college experiences at all Maine high schools.
 - Establish pathways to postsecondary education so that more adults can earn degrees.
 - Encourage and support Maine employers to develop and strengthen employee programs.

5. Governance

This section looks at the governance of community colleges in Massachusetts in the context of governance models in other states in order to assess the relationship between governance structures and community college performance and outcomes. This provides a framework for looking at whether change in governance needs to be a component of strategies to improve the effectiveness and outcomes of Massachusetts community colleges. The section also explores links between governance models and performance in other states and looks at potential promising practices.

A key governance question emerged during the study: is community college governance a threshold issue for achieving change to improve graduation rates and skill development? Is it possible to achieve needed change within the current governance system or is change in governance structure a prerequisite for improving community college outcomes? The answer is that more central governance appears to be necessary but not sufficient for achieving significantly better outcomes by implementing promising practices to scale. Central governance will not by itself create effective reform, but it puts in place systems and structures that have capacity to drive system-wide reform in a large number of colleges.

Experience nationally suggests that while governance is a critical variable in community college system development and policy, it may be difficult to change and requires significant public and political support. A strategic approach to improving college attainment in Massachusetts community colleges requires both an analysis of the importance of governance in an effective change strategy and the potential for governance change in the Commonwealth.

A number of interviewees brought up community college governance in Massachusetts as an important issue. Massachusetts does not have a strong centralized community college system and individual colleges, which are governed by their own boards, have a significant level of autonomy. For the most part, community college presidents favor the autonomy they get in a decentralized system of governance,

although they have a range of different views about the value of local boards. Others contend that things aren't really going to change until there is a stronger central community college system. One person described the current governance system as "feudal," and others believe that the Board of Higher Education has no authority over individual campuses.

The research points to a number of ways in which strong central state governance systems can drive and sustain reforms to achieve better community college outcomes. This is true of state community college systems such as Oregon, Kentucky, North Carolina, or Washington. It is equally true of multi-campus urban systems such as Community College of Denver; Portland Community College; Maricopa Community College in Arizona; or City University of New York, a central citywide system of public community colleges and four-year colleges and universities. A number of state and multi-campus community college systems have played important roles in driving and supporting reform agendas and in bringing promising practices to larger scale. The issue of governance in Massachusetts should be looked at in terms of potential for changes in state governance and development of a regional leadership structure for Greater Boston Area community colleges.

While central governance does not by itself guarantee effective practices and superior outcomes, there is evidence that it is extremely difficult to achieve meaningful change and dramatic improvements in outcomes without strong and effective central governance. Central governance systems are most effective in states where 1) there is a clear community college mission that gives the institution a central role in state workforce and economic development strategies and 2) states are working to strengthen integration between P-12 education, community colleges, adult basic education, workforce development, and TANF efforts. In North Carolina, for example, the community college system was created as the state's primary economic development institution and is still seen as the primary economic development engine. In Oregon, the commu-

nity college system was reconfigured into a unified Department of Community Colleges and Workforce Development that is also the state's primary provider of Adult Basic Education and ESOL.

Several state community college systems have played lead roles in improving and sustaining community college effectiveness and outcomes by:

- Setting clear community college missions, goals, and performance measures.
- Promoting integration with P-12 education, adult basic education, workforce development, and TANF systems.
- Supporting development and scale-up of innovative promising practices.

Integration between Kentucky's state community college system and TANF agency led to a higher college enrollment rate for TANF recipients than the state's adult population as a whole (Liebowitz et. al. 2001). Kentucky's community colleges and the separately governed adult basic education system work in concert to help low-skill adults enter college and succeed in college-level programs through a division of labor. In Jefferson County, 77 percent of students dually enrolled in adult basic education and developmental education were taking college-level programs, more than double the national rate (Liebowitz and Taylor 2004). These results could not have been achieved without a strong central community college system that is committed to these goals, that could build necessary political support and work closely with the TANF and adult basic education leadership, and that could drive change within the community colleges through a combination of performance accountability and technical assistance.

Centralized leadership of multi-campus community college systems in Denver and Portland has led decades-long improvement in skill development and graduation outcomes for students at greatest risk of not succeeding. There has been a consistent focus on improving developmental education, student academic and personal support services, and academic practices and structures that improve retention and graduation rates for academically under-prepared and pre-college students. There is a long history in urban systems of developing innovative practices within

programs and bringing them to scale across the institution. Community College of Denver has been working with the Denver Public Schools and the Mayor to develop high school reforms that will increase postsecondary enrollment and graduation rates of Denver public school students. Again, these achievements would not have been possible without effective central leadership.

College Now, an innovative partnership between City University of New York (CUNY) and the New York Public Schools provides free credit-bearing college courses for students in most New York City high schools, often through partnerships between particular CUNY campuses and New York high schools. Approximately 14,000 high school students take credit-level courses in CUNY campuses, more than three-quarters of them students of color. Approximately one-third of NYC public high school students that entered CUNY in fall 2003 had participated in College Now. The ability to do this at scale in almost every NYC high school is only possible because of the strong CUNY public higher education system, part of the governance structure, that does not exist in Massachusetts.

Governance is also related to community college funding. Unlike Massachusetts, there are a number of states including Maryland and Ohio where community colleges receive significant funding from local and county revenues. Nationally, 24 percent of all community college revenues come from local or county sources. Montgomery College in Montgomery County, Maryland and Sinclair Community College in Montgomery County, Ohio both receive a significant portion of their revenues from county tax levies and believe that this provides greater accountability to meeting the needs of their service areas.

6. Recommendations

Primary recommendations

State government, business, and civic leaders should make strengthening community colleges a priority as part of a wider commitment to invest in public higher education like that advanced by the 2005 Senate Task Force on Public Higher Education. In an economy that increasingly relies on talent, Massachusetts needs a first rate public higher education system to complement its constellation of private higher education institutions to attract and retain a skilled workforce and address a growing skills shortage. Community colleges serve as a bridge between the education and workforce development systems and better prepare the Commonwealth's workers for jobs.

Massachusetts is under-funding its higher education system to its economic peril, and saddling students with unaffordable fees. But contingent on proposals for more funding and fee restructuring should be the strengthening of performance accountability systems and the application of promising practices from around the country that apply innovative and partnership-based solutions to vexing college degree attainment challenges.

In considering ways to upgrade community colleges as part of a wider commitment to strengthening higher education, leaders should keep in mind the lessons learned from the Commonwealth's recent success in strengthening K-12 systems. In 1993, many naysayers openly scoffed at the notion that K-12 public schools could be improved in part by instituting new measurement systems (e.g. MCAS) to inform strategies and track progress. While reform of this system remains in progress, K-12 public schools in Massachusetts have improved largely because of innovative strategies rooted in measurement and a widespread commitment from stakeholders both inside and outside of the system to lend their expertise and provide increased financial support.

Massachusetts needs a similar commitment from leaders across sectors to strengthen the community college

system. Specifically, state government leaders should:

- 1. Strengthen performance accountability systems.** Put more simply, get better data on graduation rates at community colleges and use that data to inform improvement strategies and investments. It is unacceptable for Massachusetts community colleges to have one of the lowest 3-year graduation rates for first-time, full-time students in the nation. We should be leading the nation, not lagging it. There are several promising approaches by which to remedy this, some of which are outlined below, but all remedial strategies should be guided by available and accurate data. Unfortunately, Massachusetts does not have good data on graduation rates for both traditional-age and adult students in as full and readily accessible a format as in other states like California.

The Commonwealth's recent education reform successes at the K-12 level demonstrate how progress can be made with the introduction and use of new performance measurements like the MCAS exam. Creating an effective accountability system provides a foundation for a clear focus on getting better results, identifying the reasons for less than optimal performance on key measures, and developing strategic initiatives to improve performance. An accountability system should be developed that provides results-based benchmarks for key outcome measures for college attainment of traditional-age and adult community college students through data transparency and/or performance expectations. Specifically, performance should measure three-year, six-year and transfer graduation rates to allow for tailored reform strategies.
- 2. Develop a specific action plan** by which the 3-year and 6-year college degree attainment rates for the system should be improved so that by 2012 Massachusetts is higher than the national average. State funding should also be increased annually with a meaningful percentage of new revenues linked to a new Community College Improvement Fund that makes strategic investments to improve student

attainment by funding proposals to improve key attainment measures by implementing promising practices.

3. Better align community colleges with feeder systems, such as community-based ESOL/ABE programs and college prep curricula, with curricula at area community colleges to improve outcomes for nontraditional students.

4. Craft population-specific strategies that recognize the distinctiveness of various groups of community college students that are tailored to improve the pipeline from high school to college graduation. Strategies might include efforts to:

- a) Enable more students in the Homeowners group to attain the academic goals, academic impetus, and graduation outcomes of Tenants.
- b) Dramatically decrease the number of beginning traditional-age students who become Visitors and leave during their first year without a credential.
- c) Implement accelerated developmental education, comprehensive academic and personal support services, case management, and occupational and career counseling in order to increase the graduation rate of Homeowners seeking terminal Associate's degrees.
- d) Develop strategies to help more adults graduate. These include transitions from non-credit adult basic education, ESOL, workforce development, and developmental education to credit-level occupational programs, intensive accelerated learning, career ladder pathways, modular certificate and degree programs, teaching contextualized basic skills and English language proficiency within occupational programs, and transparent connections between education attainment and career advancement

5. Foster collaborations between community colleges and P-12 education systems that target improvement in key areas linked to high attainment that can be affected by P-12 and community college practices. Encourage students to:

- a) Complete Algebra 2 or higher in high school.
- b) Have strong motivation to attain a degree.
- c) Enroll directly in college after high school graduation.

d) Complete 20 or more credits in the first year in community college.

e) Complete 4 or more college-level credits in summer sessions.

f) Complete college-level math credits during the first year in college.

g) Access financial aid.

6. Replicate national promising practices, when applicable and appropriate. These include promising practices in:

a) Institutional teaching and learning such as intensive accelerated learning and career pathways programs.

b) Collaboration with education and workforce feeder systems on programs like dual enrollment. While the law allows dual enrollment in Massachusetts, it has not been funded since 2003. There is interest from some community colleges, some Boston high schools, and the Board of Higher Education in expanding dual enrollment.

c) Updating governance systems. Several states have high quality centralized community college governance (e.g. Washington, Oregon, and Kentucky) or regional systems (e.g. Miami-Dade Community College in Florida and Maricopa Community College in Arizona). One relevant example of a shift toward more effective central governance of higher education in Massachusetts was the reorganization of the UMass system as a result of the Saxon Commission report (1989). Other states have successfully promoted inter-school integration to facilitate transfers. Vermont has a policy that all grades earned from any institution of public higher education appear on a single transcript and count toward the student's final grade point average. Massachusetts could gain by implementing practices such as these as well as by moving forward with current plans to refine its data collection efforts to more accurately track transfers.

Philanthropic organizations like the Boston Foundation should also provide more resources for demonstration projects to implement targeted practices. Examples include linking small high schools to community colleges; incorporating community colleges in high school reform; dual enrollment for urban high school students; middle college and early

college high schools; transitions between community colleges and education and workforce feeder systems; and implementing and scaling up promising practices for teaching and learning. Local foundations could also leverage resources through partnerships with other Massachusetts and national funders. Local foundations could also partner with national funders such as the Lumina Foundation, whose *Achieving the Dream* initiative promotes and facilitates better use of data and helps track cohorts of students to improve student outcomes.

Moreover, business and civic leaders need to raise awareness about the important role of community colleges in addressing skills shortages and feeding the workforce overall. They should explore ways to strengthen workforce development partnerships with community college in a mutually beneficial manner.

Secondary recommendations

The philanthropic community should also play a key role in helping to jumpstart implementation of these recommendations. There are five broad approaches that local philanthropy could take:

- Convening community college leaders, stakeholders, business and community leaders, funders, and public officials to build public consensus on the need for improving postsecondary pipeline outcomes, the key role community colleges can play in increasing the number of state residents with college skills and credentials, and goals and benchmarks for improvement.
- Commissioning studies to document the need for change and identify national promising practices.
- Reviewing existing grant making and identifying areas where resources could contribute to demonstration projects.
- Providing new resources for demonstration projects which promote community college promising practices.
- Testing the potential for reform of governance structure.

These recommendations, presented in greater detail below, reflect the reality that increasing the number of Massachusetts residents that have postsecondary skills and credentials is an education and pipeline issue that

requires change in community colleges, change in education and workforce feeder systems, and more effective transitions between community colleges and pipeline feeder systems. The focus of this report, however, is on strategies to improve postsecondary graduation rates through change in institutional community college practice and state public higher education policies. There is an additional focus on areas where collaboration between community colleges, K-12 education, adult education, and workforce systems can accomplish more than is possible separately.

Convening

There is a clear need to convene key stakeholders, public decision makers, and opinion leaders together in order to build public consensus on a reform agenda to significantly increase education and workforce pipeline results. Public recognition of the importance of change in Massachusetts community colleges and strong support for reform is necessary to provide a strong foundation for implementing the recommendations. Improvement in community colleges and their pipeline feeder systems is needed to:

- Dramatically increase the number of BPS 9th graders that complete at least two years of postsecondary education or training and earn an Associate's degree or higher.
- Increase the number of Boston residents that have the skills and credentials necessary for family economic self-sufficiency.

It is necessary to build the kind of broad public, political, and business support that was successful in driving P-12 education reform in Massachusetts, and to extend the goal of reform to postsecondary graduation. Community colleges can play a more effective role in improving postsecondary graduation rates but it will take changes in community college practices, changes in state policies, and new partnerships and shared responsibility between community colleges and feeder systems.

One option is to bring together community colleges, public and private four year colleges and universities, state higher education leadership, the BPS, adult education and workforce development systems,

employers, business organizations, state and local political leadership, and funders to come to agreement on the pressing need for change and develop a plan for community colleges, separately and in partnership with feeder systems, to play a key role in improving P-16 pipeline outcomes. The goal is building broad community consensus on:

- The critical need for change.
- Higher goals and expectations for P-16 pipeline results with outcome-based benchmarks for meaningful progress.
- Higher aspirations and goals for Massachusetts community college system and a vision of what a “best practice” system would look like.
- Key leverage points where change will make a significant difference in pipeline results and measures of successful reform.
- A blueprint for reform based on promising practices to achieve higher aspirations for BPS students and Boston adults with a high school education or less.

A key component would be ramping up performance

of community colleges and feeder institutions through data-driven performance accountability targeted at achieving agreed-upon goals for improving postsecondary success. This would be driven by an analysis of current pipeline outcomes in Greater Boston compared to overall Massachusetts and national benchmarks. It would also be driven by an understanding of national promising practices for increasing the ability of nontraditional adult students and high school graduates from urban school systems to complete at least two years of postsecondary education and attain college credentials.

While the focus should be on change in community college practice and state policies, there is also a need to explore promising practices for ways that community colleges can help improve education and workforce results through collaboration and shared responsibility with P-12, adult education, and workforce development systems. The key is strengthening the capacity of community colleges, separately and in collaboration with other systems, to improve pipeline outcomes and indicators of success for entering 9th BPS graders disaggregated for non-exam and exam high schools. These include:

Pipeline Outcomes

- High school graduation with diploma
- High school graduates prepared for college success
- Enrollment in college
- Completion of first year of college
- 6-year graduation with Associate’s degree or higher

Indicators

- Proficient or Advanced scores on MCAS Math and English tests⁵
- Algebra 2 or more in high school
- Strong college-going goal in HS
- Direct enrollment in college
- Strong graduation motivation & persistence
- 20 or more college credits in 1st calendar year
- 4 or more college credits in summer sessions
- College-level math credits in 1st year

Possible Benchmarks

- MA average HS graduation, MCAS, college enrollment rates
- National average CC graduation and 1st year retention rates
- “Homeowner” and “Tenant” pipeline outcomes & indicators of success: shift more students to groupings with higher outcomes.

There is considerable debate over how community college graduation rates are computed. The key issue is whether students who are not really seeking a degree are counted as “degree-seeking.” At the same time, however, high schools and community colleges should have shared responsibility to expand student goals and aspirations. Increasing student, family, and community goals for postsecondary enrollment and graduation is a key component of improving postsecondary graduation rates for traditional-age high school graduates, dropouts, and adults.

More effective education and career counseling both in high school and in community colleges can make a significant difference in college enrollment and graduation rates by giving students a clear sense about the impact that earning a degree will have on their lives and the steps they can take in high school and college that will increase the odds of graduation. There are examples of promising practices in high schools, community colleges, and adult education programs for strategies to increase student motivation for college enrollment and completion.

There are a number of different models for communities coming together, including statewide initiatives, in concerted efforts to increase college enrollment and graduation rates. Examples include the Maine Compact for Higher Education, statewide efforts in North Carolina described above, the Berkshire Compact, or developing a Boston Compact that extends to improving P-16 pipeline outcomes. The convening role is critical for bringing decision makers, stakeholders, and opinion leaders together around such comprehensive initiatives.

Initiatives underway in Maine illustrate one multifaceted approach. The College for Maine effort is working to change the expectations and behavior of Maine people regarding college education, framing it as a right and a responsibility of all residents. This is combined with action strategies to increase financial aid, to provide early college experiences at all Maine high schools, to establish pathways to postsecondary education for adults and to encourage employers to develop and strengthen employee programs.

The Maine Community Foundation has partnered with the Maine Development Foundation to create the Maine Compact for Higher Education, which has developed a shared vision of college as the right and

responsibility of all Maine residents. The Compact has started to publish an annual report on indicators of higher education attainment. In addition, they have developed four action strategies:

- Increase financial aid to improve access to and persistence in college for low income students.
- Provide early college experiences at all Maine high schools.
- Establish pathways to postsecondary education so that more adults can earn degrees.
- Encourage and support Maine employers to develop and strengthen employee programs.

The convening could be viewed as a two step process: 1) assemble a broad gathering of stakeholders where the initial findings of this report would be shared and perhaps an example of another state’s systemic approach presented; and 2) if enough interest exists, convene a smaller task force which would be responsible to agreeing on key strategic goals for a campaign to improve Massachusetts community colleges.

Commissioning studies

Building public consensus on the need for change and a higher vision of what is possible will require a deeper knowledge base in a number of key areas. The philanthropic community could commission additional studies that can play important roles in building public and political will for change, setting goals and benchmarks for reform, and developing effective change strategies. The study identified three key areas where further research and reports could play important roles in highlighting key issues as part of the convening strategy:

- *Promising practice in community college teaching and learning:* The philanthropic community could commission a report on community college promising practices for teaching and learning that would help crystallize aspirations for the Massachusetts community college system and the enhanced role it could play in helping more families achieve economic self-sufficiency and developing a skilled workforce that can drive economic growth. It is critical to create a vision of what a promising practice community college system would look like and the difference it could make statewide and in the Greater Boston Area.

■ *Promising practice in integration and transitions between community colleges and feeder systems:* Integration of and transitions between community colleges, P-16 public education, dropout prevention and reentry, adult basic education and ESOL, and workforce development programs plays a key role in improving postsecondary outcomes and skill development for adults at multiple skill levels. Improving transfer rates between community colleges and four-year institutions is also an important area of focus. The philanthropic community could commission a study of state, regional, and local promising practice in providing pathways from diverse pre-college entry points into credit-level postsecondary programs.

■ *Promising practice in community college governance:* Most of the research on community colleges has focused on institutional promising practices within community colleges. There is significantly less knowledge about promising practices in state governance, state community college funding policies, and the impact of central state community college systems. The philanthropic community could commission a report on comparative governance models and state-level promising practices in 6-8 states and their impact on improving community college outcomes. This should take place in the context of exploring the feasibility of changing governance of community colleges.

■ Improving postsecondary retention and completion through strategies such as accelerated developmental education, improved counseling and student support services to increase retention, and creating transitions from noncredit to credit programs.

Resources could be leveraged through partnerships with other Massachusetts and national funders through, for example, participation of Massachusetts in Achieving the Dream or Gates Foundation early college and dual enrollment programs.

New resources for demonstration projects

Foundations could initiate or partner on demonstration projects around community college program innovations to strengthen high school graduation, college enrollment, and postsecondary completion for high school graduates, high school dropouts, and low-skill adults. Examples include:

- Linking small high schools to community colleges;
- Incorporating community colleges into high school reform strategies;
- Dual enrollment programs for BPS and other urban students;
- Middle College and Early College strategies;
- Connections between adult education, workforce development, and developmental education; and

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Endnotes

¹ National data are used because there is a significant body of national data related to student characteristics and outcomes that is for the most part not available for specific states. Despite differences between states, these national data provide a useful analytic framework for looking at community colleges in Massachusetts.

² The study also includes 18- to 24-year-old students who entered community college those years but did not have a high school diploma or GED.

³ IPEDS is the Integrated Postsecondary Education Data System, the core postsecondary education data collection program for the National Center for Education Statistics of the U.S. Department of Education.

⁴ GRS is the Graduation Rate Survey, one of the 9 components of IPEDS, which establishes the number of full-time first-time students included in the calculation of IPEDS graduation rates.

⁵ As a first step, it is particularly important to raise the percentage of African-American and Hispanic students that score proficient or advanced on 10th grade MCAS Math and English tests to the statewide average for all 10th graders.

