

EDUCATION POLICY FOR ACTION SERIES

EDUCATION CHALLENGES FACING NEW YORK CITY

Are New York City's Public Schools Preparing Students for Success in College?



John Garvey

*in collaboration with
Annenberg Institute research staff*



Annenberg
Institute for
School Reform

AT BROWN UNIVERSITY

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About the Annenberg Institute for School Reform

The Annenberg Institute for School Reform is a national policy-research and reform-support organization, affiliated with Brown University, that focuses on improving conditions and outcomes for all students in urban public schools, especially those serving disadvantaged children. The Institute's vision is the transformation of traditional school systems into "smart education systems" that develop and integrate high-quality learning opportunities in all areas of students' lives – at school, at home, and in the community.

The Institute conducts research; works with a variety of partners committed to educational improvement to build capacity in school districts and communities; and shares its work through print and Web publications. Rather than providing a specific reform design or model to be implemented, the Institute's approach is to offer an array of tools and strategies to help districts and communities strengthen their local capacity to provide and sustain high-quality education for all students.

Annenberg Institute for School Reform at Brown University

Box 1985

Providence, Rhode Island 02912

233 Broadway, Suite 720

New York, New York 10279

www.annenberginstitute.org

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About the Author

John Garvey was dean of the Teacher Academy and Collaborative Programs at City University of New York (CUNY), Office of Academic Affairs, until October 2008. He oversaw CUNY's numerous collaborations with the New York City Department of Education (NYCDOE) – including College Now, the Middle Grades Initiative/GEAR UP project, the Early College Initiative, and the CUNY School Support Organization. He also coordinated the development of the Teacher Academy, an undergraduate program intended to prepare math and science teachers for the city's public middle schools and high schools. The Academy was CUNY's component of the New York City Partnership for Teacher Excellence, which also includes NYCDOE and New York University. In 2003, Mr. Garvey led the effort to establish CUNY Prep – a college preparatory program for young adults who had left school before obtaining a diploma. He worked at CUNY's central office for twenty years. Since leaving CUNY, Mr. Garvey has been doing consulting work with the Annenberg Institute for School Reform at Brown University, Jobs for the Future, the Academy for Educational Development, the National League of Cities, and the Youth Development Institute.

About the Series

Education Policy for Action: Education Challenges Facing New York City is a series of research and policy analyses by scholars in fields such as education, economics, public policy, and child welfare in collaboration with staff from the Annenberg Institute for School Reform and members of a broadly defined education community. Papers in this series are the product of research based on the Institute's large library of local and national public education databases; work with the Institute's data analysis team; and questions raised and conclusions drawn during a public presentation and conversation with university and public school students, teachers, foundation representatives, policy advocates, education reporters, news analysts, parents, youth, and community leaders.

Among the issues that the series addresses are several pressing topics that have emerged from the Institute's research and organizing efforts. Other topics covered in the series are:

- Confronting the impending graduation crisis
- The small schools experiment in New York City
- Positive behavior and student social and emotional support
- Modes of new teacher and principal induction and evaluation

Many thanks to the Robert Sterling Clark Foundation for its support of the public conversations from which this report and the other publications in the series grew.

For a downloadable version of this report and more information about the series, please visit www.annenberginstitute.org/WeDo/NYC_Conversations.php.

Acknowledgments

I'd like to thank the Annenberg Institute for School Reform for the opportunity it provided me to conduct the research and complete this report. Specifically, I'd like to thank Tara Bahl, Ivonne Garcia, Christina Mokhtar, and Deinya Phenix for their assistance in helping me work through different ways of thinking about the issues involved. I thank Christina and Deinya for ensuring that all the citations were correct and for designing the slides used in the April 21, 2009, presentation "Are New York City High Schools Preparing Students for Success in College?" – the second conversation of the Education Policy for Action Series – from which this report grew. Thanks to Deinya for her close editorial feedback throughout the editing process. I thank all the Annenberg Institute researchers for interviewing City University of New York faculty and staff and summarizing those interviews in ways that helped incorporate them into the report.

I thank Norm Fruchter for his thoughtful comments and suggestions.

I also thank the Annenberg Institute publications team, especially Margaret Balch-Gonzalez, Susan Fisher, and Haewon Kim for their exceptionally good work in the copyediting and layout of the report and the Executive Summary (both available for download at <www.annenberginstitute.org/WeDo/NYC_Conversations.php>), under considerable time pressure.

I thank Lori Chajet for helping me deepen and expand my understanding of the issues related to college access pedagogy.

Many thanks to my fellow panelists at the April 21 conversation: Rashid Davis, principal of Bronx Engineering and Technology Academy, and Adilka Pimentel, an alumna of the Urban Youth Collaborative and a student currently enrolled at Borough of Manhattan Community College.

Special thanks, for taking the time to be interviewed, to Pedro Baez, director of collaborative programs at Lehman College; Brenda Greene, professor of English at Medgar Evers College; Sonja Jackson, dean of curriculum and instruction at New York City College of Technology; Mark McBeth, associate professor of English at John Jay College; William Sweeney, professor of biochemistry at Hunter College; and Daniel Voloch, director of the At Home in College program and formerly coordinator of the College Now Program at Hostos Community College.

I'd also like to thank David Crook, the university dean for institutional research and assessment at the City University of New York, for making available the data around which much of the report is constructed. David was also willing to patiently answer way too many of my questions. I'm sure he's happier than I am that, eventually, I stopped calling.

If I've forgotten anyone, I apologize and thank you, anyway.

— John Garvey
September 2009

Introduction

Postsecondary education is increasingly necessary to prepare young people to meet the demands they will face as workers, citizens, and parents in the twenty-first century. High school alone will not enable them to take advantage of opportunities, to pursue interests, develop talents, or satisfy needs for physical, intellectual, and aesthetic satisfaction.

It is often assumed that the completion of high school implies that a student is ready, at least academically, for the next step (such as enrollment in college). But local and national rates of remedial course taking in college, as well as the surprisingly low graduation rates from college, indicate that the assumption is mistaken.

In New York City, the public schools are graduating more students, and more of them are going on to college. Recently, it was announced that in fall 2008, the City University of New York (CUNY) freshman class included almost 14,000 graduates of the city's public high schools (compared with just over 10,000 in 2002). In addition, fewer of those graduates needed remediation, compared with graduates from previous years. In 2002, 18 percent of public school graduates enrolling in associate degree programs needed no remediation, compared with 26 percent in 2008 (NYCDOE 2009).

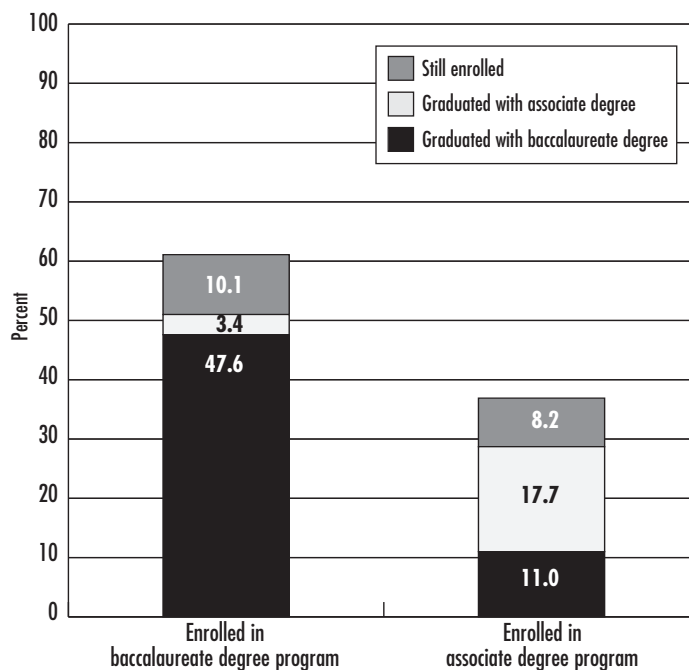
This is welcome news. But the overall situation remains in need of serious attention. At CUNY, for example, the most recent system-level six-year graduation rates for all full-time, first-time freshmen who enrolled in baccalaureate degree programs in 2002 were 3.4 percent for associate degrees and 47.6 percent for baccalaureate degrees. An additional 10.1 percent were still enrolled (CUNY Office of Institutional Research and Assessment 2009a). The

most recent six-year graduation rates for all full-time, first-time freshmen enrolled in associate degree programs were 17.7 percent for associate degrees and 11.0 percent for baccalaureate degrees. An additional 8.2 percent were still enrolled (CUNY Office of Institutional Research and Assessment 2009b). (See Figure 1.)

These figures don't differ significantly from national data (Chait & Venezia 2009):

- College enrollment rates of high school graduates increased from 49 percent in 1972 to 69 percent in 2005.
- A little over a quarter to about a third of all freshmen and from 42 percent to 60 percent of students at two-year institutions are required to take remedial courses.

Figure 1.
Six-year graduation and still-enrolled rates for full-time, first-time freshmen entering CUNY in fall 2002



SOURCE: CUNY, Office of Institutional Research and Assessment 2009a, 2009b

There are numerous policies and actions that shape the experiences and the decisions of young people. Some of those policies are not as clear or coherent as they need to be.

- Only about 52 percent of college students complete a degree and very few do so within four years; “among students starting at ‘four-year’ institutions, only 34 percent finish a B.A. in four years, 64 percent within six years, and 69 percent within eight and a half years” (p. 1).

These results mean that far too many young people who enroll in college fail. Thomas Bailey (2007), from the Community College Research Center at Teachers College, has observed:

Despite the importance of community colleges and the best intentions and hard work of their faculty and staff members, we are failing these students in profound ways. A majority of incoming students expect to earn a bachelor’s degree but only 18 percent obtain one within eight years of enrolling. Some 15 percent earn an associate degree. Many fail to make it through their first year, much less reap the benefits of programs that help them take advantage of new opportunities in the global economy. The facts are hardly revelations to those who study and work in the institutions. (p. 4)

Unfortunately, the actual situation is not widely understood. For us to ensure that New York City’s public high school graduates are prepared for success in college, we need first to understand what is involved and to identify the

key challenges. We then need to make sure that a plan of action to improve matters is characterized by clarity, coherence, and consistency.

Toward that end, this report will address four different, but related, topics:

- How should we think about being ready for college?
- Are New York City public high school graduates ready for college?
- Is the college readiness system adequate for promoting college readiness?
- If the answers to questions two and three are negative, what should we do?

The report’s findings are based on:

- relevant national research on college readiness and essential elements of effective academics and college counseling services;
- high school achievement and college admissions and performance data for New York City public school graduates entering CUNY;
- the perspectives of faculty and staff of CUNY and the New York City Department of Education (NYCDOE) who are familiar with the experiences of graduates coming to the colleges from the public high schools;
- the comments of panelists and audience members, including a high school principal and a recent high school graduate, who participated in a session on this topic on April 21, 2009, in New York City as part of the Education Policy for Action Series convened by the Annenberg Institute for School Reform at Brown University.

A word about the college readiness system: there is no real system if, by “system,” we mean an intentionally organized set of policies and actions that are designed to ensure that as many young people as possible successfully make the transition from high school to college

and go on to earn a postsecondary credential. But there are numerous policies (including those governing high school graduation and college admission) that shape the experiences and the decisions of young people. There are also numerous actions undertaken by high schools, educational not-for-profit institutions, community-based organizations, and colleges that are intended to achieve that goal.

As we will see, some of those policies are not as clear or coherent as they need to be, and some of those actions are not as well-informed as they need to be. The policies must be amended or clarified and the actions far better aligned with the situations students will encounter. The only real test of the efficacy of a system is the extent to which it enables more students to be successful.

1 How should we think about being ready for college?

Figure 2.
Distribution of SAT scores at selected postsecondary institutions

CUNY colleges	SAT Math		SAT Critical Reading	
	25th percentile*	75th percentile**	25th percentile*	75th percentile**
Baruch College	550	650	490	580
Brooklyn College	490	590	450	560
City College	440	580	410	550
Hunter College	500	600	480	580
John Jay College	410	520	410	520
Lehman College	400	500	400	490
Queens College	480	580	450	550
York College	390	470	370	460

SUNY colleges	SAT Math		SAT Critical Reading	
	25th percentile*	75th percentile**	25th percentile*	75th percentile**
SUNY Albany	510	610	500	590
SUNY Binghamton	610	690	570	660
SUNY New Paltz	510	600	520	600
SUNY Stony Brook	570	660	520	610

Private colleges	SAT Math		SAT Critical Reading	
	25th percentile*	75th percentile**	25th percentile*	75th percentile**
Fordham University	570	660	560	660
Long Island University	410	550	400	500
Marymount Manhattan College	470	570	490	600
New York Institute of Technology	440	560	420	520
Pace University	490	590	480	580
Saint John’s University	480	600	480	580

Note: Data for this analysis were obtained from the National Center for Education Statistics Integrated Postsecondary Education Data System at <<http://nces.ed.gov/collegenavigator>>.

* 25th percentile: 25 percent of students scored at or below this score
 ** 75th percentile: 75 percent of students scored at or below this score

Within the past decade, a relatively strong consensus has emerged regarding ways of thinking about college readiness. Researchers and policy analysts have developed fairly straightforward recommendations regarding the importance of high school coursework, grades, course quality, and aspects of overall readiness. The key findings are reviewed in this section. But first, a comment is needed about the relationship between admissions and readiness.

Admissions Standards

Most students who graduate from New York City public high schools and go on to college will attend what we might describe as “non-selective” institutions – institutions that do not have especially demanding admissions standards compared with those that applicants to very elite institutions are expected to meet. These non-selective institutions include colleges within the City University of New York (CUNY) and the State University of New York (SUNY), and a large number of private institutions in the New York City metropolitan area.

Nonetheless, admissions standards in these colleges range across a broad continuum that includes:

- open admissions: colleges that will enroll any student with a high school diploma or high school equivalency diploma;
- minimally demanding: colleges whose successful applicants have some minimally acceptable grades;
- moderately demanding: colleges whose successful applicants have reasonably good grades and SAT scores;
- very demanding: colleges whose successful applicants have very high grades and very high SAT scores.

By way of illustration, let's look at a profile of the selectivity of a number of representative institutions. Figure 2 shows the distribution of SAT scores of students admitted to and enrolled at the CUNY senior colleges and selected SUNY and private institutions for the first time in 2007.¹

Understandings of college readiness should be deeply sensitive to student aspirations. Students who want to attend particular institutions or to pursue particular degrees within different institutions (such as those who want to become nurses, doctors, teachers, engineers, and so forth) must have an opportunity to become eligible for admission into colleges and programs that will enable them to do so.

Courses

On the basis of a comprehensive longitudinal analysis of the high school and college performance of students who graduated from high school in 1992, Clifford Adelman (2006) con-

cluded that the academic intensity and quality of high school course taking is the single largest predictor of college success (p. 145).

Adelman has developed an analytical framework for assessing the relative intensity of a high school student's core academic program (in English, math, science, foreign language, and history/social studies). The framework places high school graduates in one of five quintiles that reflect the number of credits they completed in the five subject areas and the level of math and Advanced Placement (AP) courses taken (see Figure 3).

Adelman has emphasized the importance of these findings because the academic intensity of students' high school experiences can be directly and positively affected by school practices. In other words, since schools can require students to take more courses, they should – because their graduates will then do better if and when they go on to college.

¹ In addition, students interested in pursuing certain demanding programs of study (such as pre-med, math and science, or engineering) will need to demonstrate higher levels of proficiency in appropriate academic areas.

Figure 3.
Adelman's framework for assessing high school academic intensity

Quintile	Average credits* earned						Percent who took math above Algebra II	Average number of AP courses
	English	Math	Laboratory science	Foreign languages	History/social studies	Computer science		
1 (highest)	4.27	4.10	3.20	3.09	3.70	0.74	96.40	0.644
2	4.17	3.81	2.71	2.23	3.62	0.56	64.70	0.068
3	4.23	3.11	1.99	1.98	3.47	0.59	0.00	0.003
4	4.10	2.98	1.36	0.74	3.44	0.61	0.71	0.019
5 (lowest)	3.43	1.81	0.94	0.62	2.82	0.28	0.05	0.006

Source: Adelman 2006

*Credits are measured in Carnegie units.

Grades

In Adelman's analysis, the grades that students earn are less significant than the courses they take. However, Elaine Allensworth (2006) of the Consortium on Chicago School Research concluded that high school grades were one of the strongest predictors of college success for graduates of the Chicago Public Schools. Since Adelman did not argue that grades did not matter, it seems prudent to include both course intensity (level of expected difficulty) and student achievement as key concerns. Few would argue with the proposition that good grades are better than poor grades, but good grades in undemanding courses have little value.

Course Quality

Not all algebra courses are the same. Adelman (2006) notes that he and his colleagues had “discovered that in some high schools, ‘precalculus’ on a transcript could mean any mathematics prior to calculus, including Algebra I” (p. 97).² In a similar vein, staff at Achieve (2004) acknowledged that “identical course titles have often masked radically different course content, with less rigorous content often the only option for the most disadvantaged students” (p. 9).

It was the intent of the standards movement and its high-stakes assessments to end the variety of ways in which students could be tracked into different academic pathways, but, as we'll see in the section on Regents exams (pages 19–21), that approach places far too much confidence in the technical designs of the assessments. An over-reliance on standards and high-stakes assessments is unlikely to fulfill the expectations of its adherents.

A promising approach to the issue of course quality has been developed by the American Diploma Project (ADP), led by Achieve (2004), which developed a set of benchmarks for English and mathematics derived, in part, from a review of actual workplace tasks and expectations of students enrolled in introductory college courses. Those benchmarks call for a level of student achievement, based on coursework, that would go far beyond the typical level aimed for in most high school courses:

The ADP benchmarks are ambitious. In mathematics, they reflect content typically taught in Algebra I, Algebra II, and Geometry, as well as Data Analysis and Statistics. The English benchmarks demand strong oral and written communication skills because these skills are staples in college classrooms and most 21st century jobs. They also contain analytic and reasoning skills that formerly were associated with advanced or honors courses in high school. (p. 4)

By way of illustration, these are topics for a five-hundred-word essay assignment in introductory philosophy at Montclair State University in New Jersey (Achieve 2004, p. 101):

- Explain Nietzsche's statement that the *doctrine of will to power* offers the solution to the problem of procreation and nourishment.
- Explain Nietzsche's claim that “faith in the categories of reason is the cause of nihilism.”
- Explain Spinoza's critique of the use of final causes in explanation.
- Explain Aristotle's conception of the relationship between moral virtue and practical wisdom.
- Explain the way in which Plato distinguished and related thinking (*dianoia*) and belief (*pistis*).

² Adelman (2006) has an even harsher assessment of some college courses: “On the postsecondary transcripts we often ran across cases of professorial marketing with course titles such as ‘Tooth Brush,’ ‘Dots to Dinosaurs,’ and (yes) ‘Good Books’ that even online catalogues could not explain. The postsecondary transcripts also carried 3-credit courses in topics such as social event planning, daily living skills, and ‘appreciation of sports’ that, when the syllabi were examined online, could be offered to junior high school students” (p. 99).

What is especially striking about these topics is the ways in which students' familiarity with very specialized uses of language (including the embedding of words from ancient Greek to highlight the precise meanings attached to English words) has been more or less taken for granted. Very few students, even very well-prepared ones, will be sure of themselves in such a situation.

Overall Readiness

David Conley (2008) of the Educational Policy Improvement Center argues that high schools need to provide students with an "intellectually coherent" instructional program. He has developed perhaps the most comprehensive description of college readiness, consisting of four interrelated and complementary elements (Conley 2007, pp. 9–14):

- **Key habits of mind** that enable students to learn content from a range of disciplines. Well-prepared students should be able to reach a conclusion, follow the logic of an argument, document a finding, postulate an explanation for an observed phenomenon, solve a non-routine problem, and interpret seemingly contradictory information regarding an event.
- **Academic knowledge and skills.** Well-prepared students should be able to write effectively and efficiently in different modes, conduct research, and synthesize findings. Well-prepared students should have what might be considered core knowledge in English, math, science, social studies, world languages, and the arts.

- **Academic behaviors.** Well-prepared students should have self-management skills that include characteristics such as time management, awareness of one's actual skill level, task prioritizing, study skills including using study groups, and the ability to take the initiative to do more than the minimum that is specified.
- **Contextual skills.** Well-prepared students should know how colleges operate: that postsecondary institutions are communities of scholars focused on ways of knowing and that the best way to connect with this community is to develop interests in ideas, concepts, and important questions. Well-prepared students should also have "college knowledge," which consists of knowing how to apply to college, access financial aid, and utilize a range of special services available to students that help them remain in school when struggling.

It bears emphasis that the acquisition of the college readiness skills that are not specifically academic is, nonetheless, only made possible by sustained engagement in developmentally appropriate academic work. It is neither desirable nor possible for students to acquire familiarity with "the other things" if they're not mastering "the essential things."

Students should know that postsecondary institutions are communities of scholars connected by ideas, concepts, and important questions.

2 Are New York City's public high school graduates ready for college?

This question should not be reduced to a yes or no answer. It is quite clear that some graduates of New York City's public high schools are especially well prepared for success in college and that some others are not very well prepared at all. And there are still more – in all likelihood, the majority – who are somewhere in between those two extremes. The more we know about the patterns of academic achievement among the city's public school graduates, the better prepared we will be to develop effective strategies. What do we know about courses, grades, Regents scores, SAT scores, and knowledge of the college-going process?

Pre-college Indicators of Readiness

Course Taking

In New York State, students must earn forty-four credits, distributed across eight subject areas, to qualify for graduation.³ The completion of that required amount of courses is not, however, equivalent to the completion of a robust program of college prep courses.

CUNY has established guidelines (content area recommendations) for the academic coursework that high school students should complete prior to entering college.

CUNY's guidelines are similar to what many other colleges and universities recommend. If students did complete all of the recommended courses, they would be in the top two quintiles of Adelman's Academic Intensity Index.

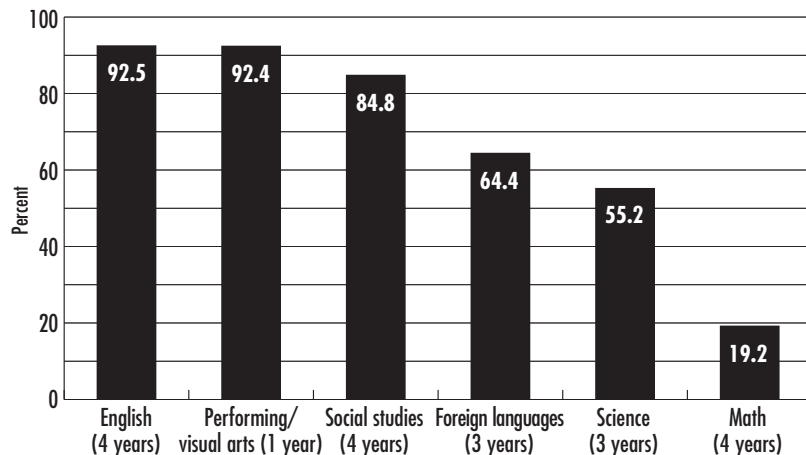
Figure 4 summarizes the percentage of recent public school graduates who met the CUNY guidelines in the fall of 2008.

Even without more detailed analysis, it's quite clear that the reason why so few students met the overall recommendations is that few met the recommendation for four years of math. It should be noted that these recommendations were only formalized during the 2007-2008 academic year and that they were not expected to have an immediate impact on the profiles of classes admitted shortly after their adoption. The numbers in Figure 4, therefore, represent a baseline against which the profiles of future entering classes might be compared.

Looking more closely at the details of math and English course taking, Figure 5 summarizes data from full-time, first-time freshmen at

³ Each credit is for one semester of coursework, other than for physical education. Students enrolled in approved career and technical education programs must complete additional courses.

Figure 4.
Percentage of recent public school graduates meeting CUNY's content area recommendations



NOTE: Data for this analysis were provided by CUNY, Office of Institutional Research and Assessment, December 2008.

Structured Opportunities for New York City High School Students to Take College-Level Coursework

CUNY in fall 2007. It is noteworthy that over 90 percent of the students had completed four or more college prep courses in English, while only just over 19 percent had done so in math.

It bears emphasis that most regular high school programs (typically, seven periods a day) can afford a student an opportunity to earn significantly more credits than either the state requires or CUNY recommends. Some students, of course, don't earn the maximum because they fail courses and have to repeat them. But there are two other scenarios – first, students take courses that do not meet the definition of college preparatory; and second, especially in twelfth grade, students who have more or less met the graduation requirements take fewer courses than a full schedule would offer.

In addition to taking high school courses, New York City's public high school students have opportunities to participate in college-level learning such as AP or actual college courses (see sidebar).

Advanced Placement

The New York City Department of Education (NYCDOE) has been making a concerted effort to promote expanded AP course taking. According to NYCDOE, in 2008, there were 23,618 students taking one or more AP exams, and 12,651 students earned scores of 3 or higher on one or more of the AP exams they took. (A score of 3 out of a possible maximum score of 5 is the minimum score required for a college or university to award credit for the student's performance on the exam.)

International Baccalaureate

There is one full International Baccalaureate (IB) school in the NYCDOE system and two IB programs within other schools. IB includes a middle-years program for students between the ages of eleven and sixteen. This program provides a framework of academic challenge and life skills and, for students aged sixteen to nineteen, a diploma program that leads to special final examinations and a formal IB qualification.

CUNY's College Now

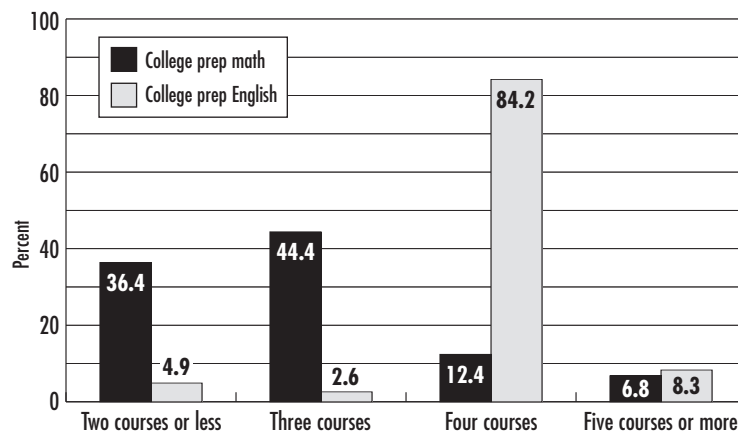
CUNY's College Now program offers eligible public high school students opportunities to take college credit courses. In 2006-2007, there were 18,912 registrations in college credit classes. Of those, 15,580 (82.3 percent) earned a grade of C or better. Course taking is broadly distributed across high schools – students from more than 300 schools participated in 2006-2007. In the fall of 2007, 35 percent of CUNY freshmen had participated in College Now, compared with 28 percent in 2002.

Early Colleges

As of 2008-2009, there were fifteen early college high schools within the NYCDOE system. Those schools offer their students opportunities to earn as much as two years of college credit prior to graduation. Since 2005, students at six early colleges affiliated with CUNY colleges have accumulated approximately 4,200 credit-bearing course enrollments. Of those, approximately 75 percent earned grades of C or better. Thirty-nine percent of the June 2008 graduates of those schools entered CUNY colleges with an average of sixteen credits.

NOTE: Information in this sidebar was provided by NYCDOE, Office of Accountability and Assessment, December 2008 (Advanced Placement), and a personal communication to the author from Cass Conrad, director of CUNY's Early College Initiative and School Support Organization, April 3, 2009 (Early Colleges).

Figure 5.
Percentage of full-time, first-time freshmen in fall 2007 who took college prep math and English courses in high school



NOTE: Data used in this analysis were provided by CUNY, Office of Institutional Research and assessment, December 2008.

⁴ In light of significant school-to-school and within-school variations in grading policies, it is advisable to maintain a degree of caution regarding aggregate grades. Nonetheless, the difference between math and English appears to be pronounced enough to suggest a significant trend.

⁵ Starting with the class of 2012, the local diploma will no longer be offered; the passing grade will be 65. The high pass score of 85 will be retained.

Grades

Figure 6 shows the range of college admissions averages in math and English for recent graduates entering CUNY as full-time, first-time freshmen in fall 2007.

It is noteworthy that students appear to earn much higher grades in English than in math. In the context of the previously reported data that students take more English courses, the combination of more courses plus higher grades would suggest that students would be better prepared in English than in math.⁴

Regents Results

High school students must take five Regents exams in order to graduate. However, until the class of 2012 (students who entered ninth grade in 2008), students will be able to “pass” in a variety of ways:⁵

- *low pass* scores (55) allow students to earn a local diploma

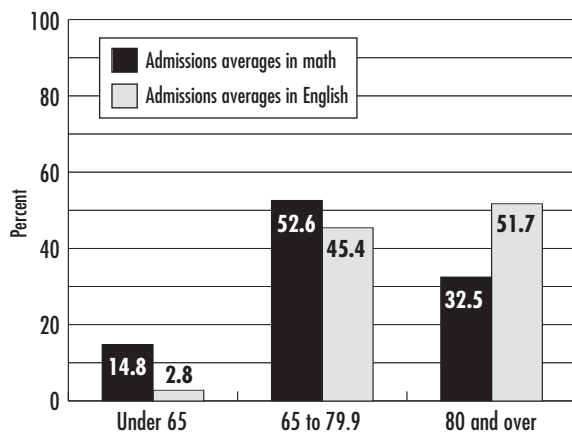
- *regular pass* scores (65) allow students to earn Regents diplomas
- *high pass* scores (85) are considered passing with distinction

Figure 7 shows the range of scores on the Math A and English Regents exams for recent graduates entering CUNY as full-time, first-time freshmen in fall 2007.

Although students take more English courses and obtain higher grades in English courses, the expected higher achievement is not sustained when it comes to scores on Regents exams. High English scores (75 and above) are only 3.2 percentage points more frequent than high math scores.

Beyond the comparison of math and English achievement, there is a deeper significance to these Regents scores. Since 1999, CUNY has allowed applicants to demonstrate that they do not need remediation and, therefore, are eligi-

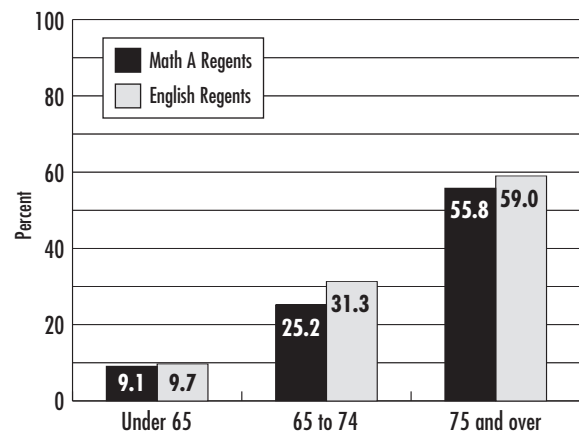
Figure 6.
College admissions grade averages in math and English for full-time, first-time freshmen entering CUNY in fall 2007



NOTE: Data used in this analysis were provided by CUNY, Office of Institutional Research and Assessment, December 2008.

Math: N=14,431; English: N=14,467

Figure 7.
Math A and English Regents exam scores for full-time, first-time freshmen entering CUNY in fall 2007



NOTE: Data used in this analysis were provided by CUNY, Office of Institutional Research and Assessment, December 2008.

Math: N=14,431; English: N=14,467

ble for admission to its baccalaureate degree programs by obtaining a score of at least 75 on the English or math Regents exams. On the basis of the scores reported above, of those entering students:

- 59.0 percent had been exempted from remediation in reading and writing;
- 55.8 percent had been exempted from remediation in math.⁶

SAT Scores

Figure 8 shows math and verbal SAT scores for recent graduates of the city’s public schools entering CUNY in fall 2007.

The SAT scores necessary to be exempt from remediation at CUNY were, until recently, 480 on both math and verbal tests. While the score distributions in Figure 8 don’t indicate the percent of students who scored 480 or 490, it is not likely that the number would be very large. Therefore, we can assume that approximately

37 percent of the students would have been exempted from math remediation on the basis of their SAT score and approximately 26 percent would have been exempted from remediation in reading and writing.⁷ (To arrive at these totals, percentages from the three bars at the right of Figure 8 were added.)

For a summary of CUNY’s requirements for exemption from remediation, see Figure 9 on page 12. For more on the implications of CUNY’s policies, see the sidebar on page 13.

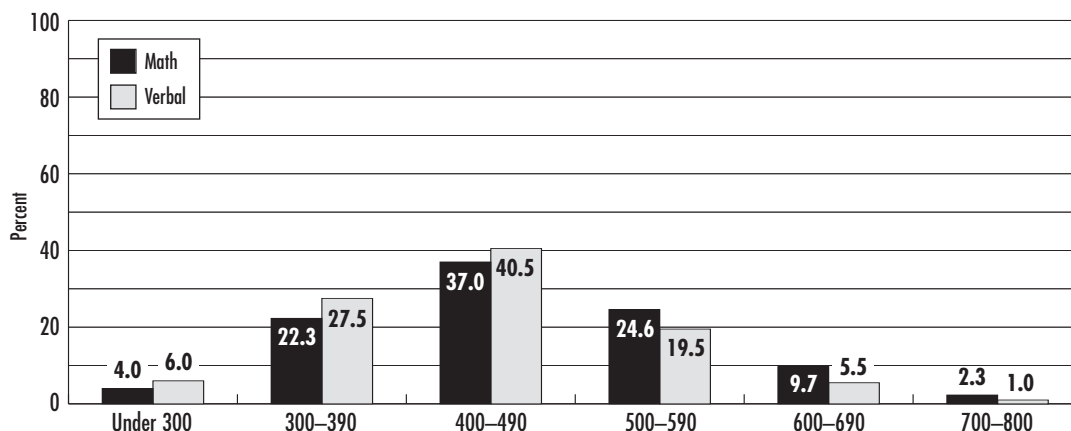
⁶ There is some additional good news reflected in these scores.

- In 1999, 61,270 students took the ELA Regents and only 20.6 percent scored 75 or above. In 2000, 51,412 did so, but only 19.6 percent scored 75 or above.
- In 1999, when the Math A exam was administered for the first time, a relatively small number of students took the test (1,053). Only 19.2 percent of those students scored 75 or above. In 2000, a larger number (4,988) took the Math A test, but only 12.9 percent scored 75 or above.

Strictly speaking, we cannot compare the results from 1999/2000 and those from 2007 because the earlier numbers are for all public school students taking the Regents exams, while the 2007 figures are only for recent graduates entering CUNY. Nonetheless, they suggest that significant progress has been made.

⁷ If, in the opinion of CUNY, SAT scores around 500 can be considered rough equivalents to Regents exam scores of 75, it appears that New York City’s high school students do not do as well on the SATs as they should be expected to do in light of the scores they earn on the Regents exams. This deserves further investigation.

Figure 8.
Math and verbal SAT scores for recent public school graduates entering CUNY in fall 2007



NOTE: Data used in this analysis were provided by CUNY, Office of Institutional Research and Assessment, December 2008. SAT scores are rounded to units of ten for reporting purposes.

College Knowledge

Let's refer back to David Conley's (2007) description of "college knowledge," mentioned on page 7:

Students have some level of "college knowledge" when they understand that postsecondary institutions are communities of scholars focused on ways of knowing and that the best way to connect with this community is to develop interests in ideas, concepts, and important questions. College knowledge also consists of knowing how to apply to college, access financial aid, and utilize a range of special services available to students that help them remain in school when struggling. (p. 3)

Conley is referring to two quite distinct types of knowledge. The first concerns what we

might consider to be the "what exactly is college" question. Conley appears to have discovered that many high school students and graduates don't have

very much of an appreciation of what college might be able to do for them – if they were prepared for it. His findings suggest that schools need to do more to expand their students' ideas of what is possible as part of a strategy to persuade them to do more while they're in high school to ensure that they will be able to take full advantage of what college can offer. There is evidence that many students are not acquiring this type of knowledge and that the absence of this knowledge affects how students perform. In a recent College Now study, 70 percent of the students from two high schools who responded to a survey said they believed that a student could succeed in college even though that student didn't do well in high school (Cochran & Burns 2008).

The second type of knowledge concerns how students get to college and how they stay there. It is undoubtedly the case that some high school students, with more or less parental assistance, have a fairly sophisticated understanding of what's involved in qualifying for college, applying for admission and financial aid, making a good choice of a college to attend, and acclimating themselves to the college environment. Nonetheless, even the most knowledgeable of them certainly need good advice and support throughout the process.

Many students (and their parents or guardians) do not have much of an understanding of what college is all about and are deeply dependent on the quality of the advice and support they receive.

Figure 9.
Test scores required by CUNY for exemption from remediation

College	SAT Math	ACT Math	Math Regents*
Baruch, Brooklyn, City, Hunter, Lehman, Queens	510	21	75
College of Staten Island, John Jay, Medgar Evers, NYC College of Technology, York	500	21	75

*Math A, Math B, Sequential II, or Sequential III

Source: City University of New York, Office of Academic Affairs 2009

They may or may not get all the support they need and they may make some not-so-wise decisions, but they will probably do well enough and wind up in a college that will serve them well – at least for a time.

However, it is also the case that many students (and their parents or guardians) do not have much of an understanding of what college is all about and are deeply dependent on the quality of the advice and support they receive. According to Lori Chajet and Sierra Stoneman-Bell (2008-2009),

Many low-income students blindly follow a reflexive, mechanical college application process rather than taking control of it themselves. Without the knowledge needed to make informed choices, many end up at colleges that do not meet their needs or expectations. Others, after realizing that they never fully understood their financial aid packages, are unable to make their first payment and never begin. Still others, despite their desire to attend, never complete the application process. (p. 41)

College Performance

Four measures would confirm that high school graduates are ready for college (Adelman 2006). These graduates would:

- have no need for remediation at the college level;
- successfully complete college introductory courses with grades of C or better and meet prerequisites for next courses in various disciplines;

A Note on Eligibility and Admissibility at CUNY

Each year, CUNY's Office of Admissions Services produces a profile of the mean GPAs and SAT scores of students admitted to each of the university's colleges (see <http://web.cuny.edu/admissions/undergraduate/counselor-corner.html#downloads>).

These profiles are developed primarily for purposes of assisting college advisors in their interactions with high school students who are deciding where to apply. It should be noted that these averages are for all admitted students. In some cases, the actual profile of enrolled students would be somewhat lower, as the result of high-achieving students who were admitted deciding to go elsewhere. In addition, these data do not directly indicate the minimum academic achievement required for admission (see last paragraph below).

It must also be kept in mind that CUNY uses Regents scores and admissions test scores as ways of determining exemption from remediation; therefore, because exemption from remediation is a criterion for admission into senior colleges, these scores determine overall eligibility for admission to a baccalaureate degree program. CUNY recently modified its policies regarding mathematics. The scores required for exemption, as of spring 2009, are shown in Figure 9. The policies regarding reading and writing remained unchanged. Students applying to all baccalaureate degree programs must obtain minimum scores of 480 on the SAT Critical Reading Test or 20 on the ACT English Test or 75 on the English Language Arts Regents exam.

Eligibility for admission does not guarantee admission. Individual colleges at CUNY make admissions decisions on the basis of an overall assessment of student achievement, including course taking, grades, and standardized-test scores. Each college develops an admissions index that "weights" various courses, grades, and scores. However, each college has the option of conducting individualized reviews of applications that fall below the expected achievement levels. It should also be kept in mind that all of CUNY's community colleges are open to individuals who have obtained a high school diploma or high school equivalency diploma (based on the GED tests). Associate degree programs are available at three of the four-year colleges (the College of Staten Island, Medgar Evers College, and New York City College of Technology) Students are admitted to those degree programs according to the same criteria as those for the community colleges. Applicants to the New York State Search for Education, Elevation, and Knowledge (SEEK) program at the senior colleges do not have to meet the index required for general applicants. For information on SEEK, see www.cuny.edu/student_affairs/financialaid/SEEK.html.

- earn twenty or more college credits by the end of their freshman year;⁸
- be on track to graduate within 150 percent of the time normally associated with degree completion – three years for an associate degree and six years for a baccalaureate degree.

⁸ Adelman (2006) states: "Less than twenty credits by the end of the first calendar year of enrollment . . . is a serious drag on degree completion" (p. xx).

⁹ Information was provided by CUNY, Office of Institutional Research and Assessment, December 2008.

Need for Remediation

The initial basic skills proficiency status of recent public school graduates enrolled in CUNY in fall 2008 is shown in Figure 10.

Students who are not considered proficient in basic skills are required to take one or more non-credit remedial/developmental courses (for which they are charged the same tuition as for a credit course) and are required to take and pass the placement tests (see pages 32–33) in order to move on to the first-level credit courses in math and English. In addition, there

are frequently other required courses that students are not allowed to take until they have exited remediation and/or successfully completed the first level of credited math and English courses. As a result, accumulation of credits and progress toward a degree is often quite slow for remediating students.

Likelihood of Success in First Courses

According to data compiled by CUNY's Office of Institutional Research and Assessment, the likelihood of students obtaining a grade of C or better in an English composition course was substantially increased if they completed more English courses, earned higher grades, and did better on the ELA Regents exam; their likelihood of obtaining a C or better was increased, but not as significantly, if they had obtained higher SAT verbal scores.⁹

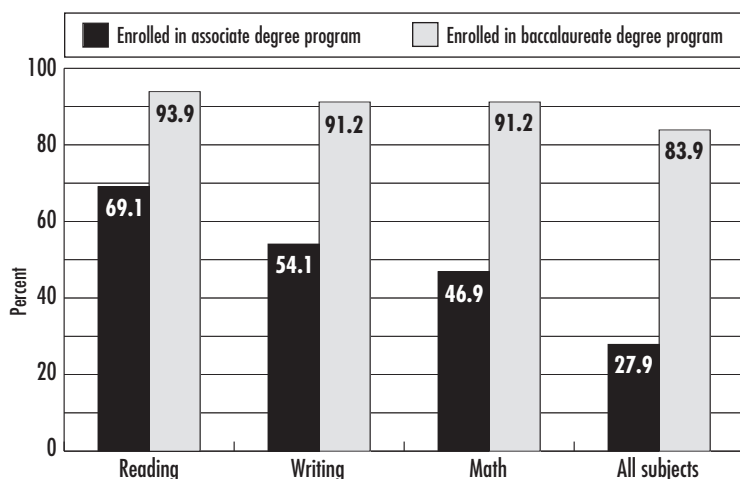
The likelihood of students obtaining a grade of C or better in intermediate algebra, college algebra, pre-calculus, or calculus was substantially increased if they took more math courses and earned higher grades; it was increased, but less so, if they did better on the Math A exam and if they obtained higher SAT math scores.

These data provide reasonably strong confirmation for the claim that higher levels of student achievement in high school correspond with greater likelihood of success in college coursework.

Practitioner and Student Perspectives on Student Readiness

Additional perspectives on student readiness were obtained from CUNY faculty and staff and NYCDOE staff who are familiar with the experiences of graduates coming to the colleges from the public high schools. Staff of the

Figure 10.
Basic skills proficiency of recent public school graduates enrolled in CUNY in fall 2008



NOTE: Data used in this analysis were provided by CUNY, Office of Institutional Research and Assessment, December 2008.

Annenberg Institute conducted structured interviews with six faculty and staff members from CUNY during the latter phase of the research described in this report. These individuals were asked about:

- the most significant student misconceptions about being successful in college;
- how ready most entering students were for their first college courses;
- what more the colleges could do to increase the likelihood of student success;
- what advice they would give to high school teachers and counselors;
- what CUNY and NYCDOE could do together to improve preparation for college.

The interviewees frequently chose to emphasize that the issue was not so much that students had misconceptions but rather that they had lacked exposure to what college would be like and that, as a result, they were not familiar with or acclimated to the culture of college. In the case of reading, this took the form of a lack of recognition of the importance of the “close” reading of a text rather than having a general sense of what a text meant. This suggests that for many students, becoming ready for college may involve less of becoming better at what they have not been very good at in high school and, instead, becoming good at something quite different.

Some of the interviewees suggested that in high school, students had been encouraged to follow “scripts” – packaged instructions – as a way to respond to assignments, whereas in college, they might very well be faced with a series of unpredictable assignments requiring innovative responses. Virtually all of the interviewees expressed their conviction that the ability of the students to do the work was not really the issue. Instead, the extent of their real engagement with the work was the salient factor.

The college staff also suggested that students were not familiar with the intensity of the work they might need to do. They may have been asked to read a book in high school over six to eight weeks, but they would be expected to read a book of comparable length and difficulty in college in two weeks.

As a result, students frequently misinterpret some of what they encounter. They see every failure as a sign of fundamental, personal inadequacy, rather than as a sign of their need to further develop skills. Instead of seeing a shortcoming as the result of too little practice, they see it as a sign that they should perhaps not be in college in the first place. In addition, they too often see “being ready” as a one-time phenomenon and fail to recognize that they will encounter many new challenges to their readiness.

For many students, becoming ready for college may involve less of becoming better at what they have not been very good at in high school and, instead, becoming good at something quite different.

The interviewees also suggested that students were frequently “surprised” – surprised by having to take remedial courses and by what they were assigned to do – and that they often became frustrated and angry at their predicament. A number of the interviewees commented on the irony that the high school graduates had taken and passed so many tests to get out of high school and then were derailed by their inability to pass yet another battery of tests that governed entry into credit-bearing courses or assignment to remedial courses. In that context, the frustration and anger appear to be quite reasonable.

At a forum held to present preliminary findings of this research on April 2, 2009, Rashid Davis, principal of Bronx Engineering & Technology Academy, and Adilka Pimentel, a 2008

graduate of an NYCDOE high school and currently a student at the Borough of Manhattan Community College, shared their distinctive views on the extent of high

school support for college readiness and the experience of being a new college student. Davis described his school’s efforts to ensure that its graduates were ready for college. Those efforts included an emphasis on high rates of

attendance, earning more credits than the minimum required for graduation, and routinely taking AP courses. What was perhaps most encouraging was that Davis reported that the average number of credits earned by seniors in his school’s first graduating class far exceeded the minimum required for graduation.

Pimentel described a less hopeful situation. She had been a successful high school student – she earned a Regents diploma, even though the great majority of her classmates did not. However, she was not provided very much assistance in figuring out what to do about college, and she had not been advised about the opportunity to become exempt from remediation at CUNY by obtaining scores of 75 or above on the Regents exams. While she scored well above that level in English, she obtained a 74 on the math Regents and was not given an opportunity to improve on that score.

As a result of her lack of guidance, she began her studies at one CUNY college but quickly discontinued them when she discovered that it was not a good match for her. Although she is doing well at the Borough of Manhattan Community College, she reported that she had difficulty becoming comfortable with the vocabulary of the college classrooms and, somewhat to the surprise of many in the audience, talked about the difficulties posed by being in a very small college English class – where the faculty member expected active involvement from all of the students. Looking back on her high school experience, she suggested that it would have been helpful for her to have had more courses to pick from, more discussions in her classes, more assigned work, and an academic focus beyond passing the Regents exams.

It is important to recognize that these graduation rates should not be seen as inevitable. What colleges do and what students do can make a great deal of difference.

Graduation

According to CUNY data, for the 14,040 students who entered associate degree programs in fall 2001, the overall graduation rates for students by basic skills proficiency status were as shown in Figure 11. At 34 percent, the graduation rate for those with no remedial needs is lower by far than it should be, but it's nonetheless important to recognize that such students graduate at more than twice the rate of students with the most severe remedial needs.

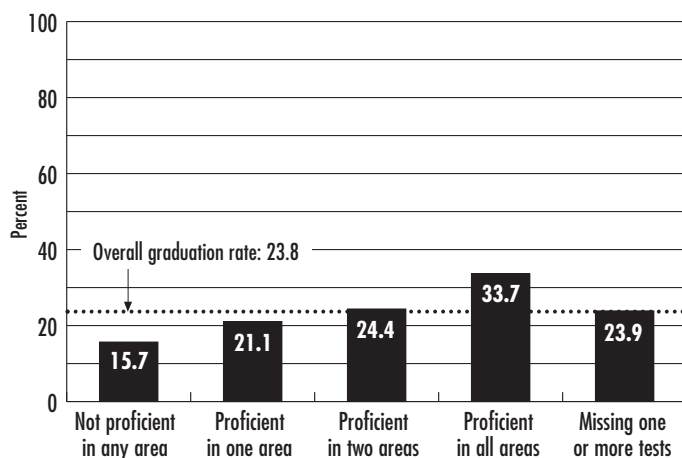
What is also important to recognize is that these graduation rates should not be seen as inevitable. What colleges do and what students do can make a great deal of difference. Kevin Carey (2008) of Education Sector recently summarized the findings of the 2008 Community College Survey of Student Engagement (CCSSE). In addition to surveying students at about two-thirds of the community colleges in

the country, CCSSE tracks the progress of students who completed the survey. Carey observed:

There turns out to be a significant, positive relationship between academic challenge and the likelihood of students getting good grades, earning credits, and graduating – even after controlling for students' income, prior test scores, and other factors. The same is true for things like student-faculty interaction and student support. The more colleges ask of – and give to – students, the better students perform. (p. A99)

Figure 11.

Six-year graduation rates by skills proficiency for students entering CUNY associate degree programs in fall 2001



NOTE: Data used in this analysis were provided by CUNY, Office of Institutional Research and Assessment, March 2009.

3 Is the college readiness system adequate?

This section shifts the focus from individual students as the unit of analysis to the overarching set of institutional policies and procedures that affect what students must do, as well as the organizational structures and supports available to assist students in becoming prepared for and making a successful transition to college.

The essential elements of an effective college readiness system are:

- clear signals of preparation
- aligned standards and assessments
- high-quality advisement and powerful supports for college going
- opportunities for students to acquire the knowledge and skills they need to meet post-secondary expectations

Clear Signals

Michael Kirst has convincingly argued for the importance of clear signals.

We start with the view that policy signals and incentives are crucial drivers of students' college knowledge and actions regarding preparation for postsecondary academic success. Moreover, clear, consistent, and appropriate signals and incentives improve student learning and affect students' motivation positively.

. . . The postsecondary completion problem is less a result of insufficient ambitions to go on to college and more one of a lack of articulated standards and clear signals concerning adequate academic preparation, and limited knowledge of what it takes to enroll and finish. (Kirst & Reeves Bracco 2004, p. 5)

Kirst and his colleagues view “admissions and placement standards and institutional arrangements as policies that communicate signals, meaning, and expected behavior to students and secondary schools.” They suggest that the key aspects of effective signals are “simplicity, clarity and consistency” (Kirst & Reeves Bracco 2004, pp. 19–20). Unfortunately, that is not the situation we have.

Between high school and college, college-bound students face a confusing set of exams. In high school, many students take state-mandated assessments and a number of other tests, including Advanced Placement (AP), International Baccalaureate (IB), the Scholastic Assessment Tests (SAT I and SAT II), and the ACT Assessment. Once they are admitted to a college or university, they typically have to take one or more placement exams to determine whether they are ready for college-level work. . . . The different assessments (K–12, exit, college entrance, and college placement) often use different formats and emphasize different content. . . . Entering first-year students know little about the content of the placement exams and, ultimately, many score poorly and are placed in remedial courses. (p. 10)

Kirst references the work of James Rosenbaum, who

suggests that there is a systemic failure on the part of colleges, particularly community colleges, to convey clear information about the preparation that is necessary for high school students if they are expecting to complete a college

degree. Rosenbaum contends that students' perceptions and understanding of college requirements are critical to their efforts in high school and ultimately to their success in college. He found that many students do not believe their high school education has relevance for their future success; furthermore, students believe there is little penalty for poor high school performance. (Kirst & Reeves Bracco 2004, pp. 16–17)

Evidence that the signals are not clear is quite abundant. Melissa Roderick and colleagues (2008) have concluded that students in Chicago's public schools are not effectively completing the college search process because of the complexity of the various processes and a lack of timely information and advice. As a result, for example, students who were eligible for admission to a baccalaureate degree program instead wound up enrolling in community colleges, where prospects of degree completion were much lower. In New York, our situation has its own distinctive challenges – primarily because of the very large role that the Regents exams play in the awarding of high school diplomas and how those exams are understood by students, parents, and school and college staffs. Unfortunately, the signals are not at all clear.

Aligned Standards and Assessments

Regents Exams

Achieve has conducted four surveys of state policies to determine the extent of alignment between high school graduation standards and the demands of postsecondary education and careers. The 2009 survey indicated that New York State was one of twenty-three states that

had adopted aligned standards (Achieve 2009, p. 5). However, the survey could not *verify* the alignment of standards in New York.

New York State's Learning Standards, developed in the early to mid-1990s, are reasonably good ones. But the only assessments in place to determine whether students are meeting the specified performance levels are the Regents exams. Furthermore, passing the exams or obtaining various scores above passing does not indicate relative readiness for college.

Achieve's data profile for New York State, prepared in January 2008, reported that 79 percent of the 2001 high school cohort in the state had passed the English Regents exam by June 2005 (it did not differentiate between those passing with 65 and 55); at the same time, only a question mark was in the space where the percent-

age scoring "college ready" was reported.¹⁰ Similarly, while Achieve (2009) reported that 80 percent of the cohort had passed at least one math Regents exam by June 2005 (again, not differentiating the types of passing scores),

another question mark was in the space where the percentage scoring "college ready" was reported (p. 5). There simply was no way to tell what percentage of students were college ready on the basis of Regents exams data.

¹⁰ These data are available at <www.achieve.org/newyork>.

In New York, our situation has its own distinctive challenges – primarily because of the very large role that the Regents exams play in the awarding of high school diplomas and how those exams are understood by students, parents, and school and college staffs.

¹¹ A number of SUNY institutions have adopted a policy of Regents scores of 75 or above for similar purposes, but it does not appear to be a system-level policy.

In an effort to remedy that situation, CUNY decided that, starting in 2000, scores on the math and English Regents would be used as a threshold of performance that would serve to exempt a student from remediation and make him or her eligible for admission into a baccalaureate degree program. In the case of math, the Regents score of 75 could have been obtained on Sequential II or III or Math A (until they were discontinued) and can be obtained on Math B (until it is replaced at some point in the future). The university has made no decision regarding the scores to be used after the new three-course Regents exams are fully developed and implemented.¹¹

This helpful policy is, unfortunately, limited in its overall effectiveness, because it is embedded in a set of policies and practices that make the development of a shared understanding of college readiness much more difficult than it

needs to be. There are significant problems with the scoring and scaling of Regents exams, for instance. The Regents exams are subjected to a

more or less permanent criticism by adherents of quite different points of view: those who object to high-stakes tests being used for determining the achievement of standards, as well as those who want the tests to be made far more demanding.

By way of illustration, a review of a reasonably active education blog included the following comments about the new Integrated Algebra Exam administered for the first time in June 2008:

In the race for the future of Thomas Friedman's flat world, New York State's

public school ninth-graders will be flat-out losers. Here in the world capital of repeated annual dramatic advances in Grade 3-8 standardized math exam scores, the NYSED announced today that a raw score of 30 points out of 87 (just 34.5 percent) was all that students were required to earn to achieve a passing grade of 65. In the State's headlong race to lead American students to the bottom rung of the industrialized world's academic ladder, we've proudly declared a 35 to be our 65. Not the 43 (36 out of 84) that we already embarrassingly accept for Math A. No, we had to lower the bar over 18 percent more in order to claim our utterly undeserved NCLB laurels. . . . What now passes in New York State for high school level competency, represented by the new Integrated Algebra I Regents Exam, is by any measure an international laughingstock, an exam that a typical sixth-grader in China could ace with hardly a second thought. ("NYS Algebra Regents" 2008)

This situation is all but completely the result of the very complex, if not convoluted, process that the New York State Education Department (NYSED) has used to set passing scores for the exams. It is a process that invites skepticism and suspicion. (For more information, see the appendix, *New York State Regents Exam: Development and Scoring*.)

For reasons of signals alone, an assessment system that is under constant scrutiny and disparagement cannot serve as a sound component of an overall college readiness system. We need

We need assessments that are accepted by key constituencies as being valid measures for a variety of different purposes.

assessments that are accepted by key constituencies as being valid measures for a variety of different purposes, and we need assessments that are sufficiently transparent in their design that those who teach and those who learn really understand what the rules are.

College Placement Tests

We also need to understand the extent to which the placement tests that students will encounter when they enroll in college align with what they have been studying and what they have been assessed on in high school. For the most part, higher-education institutions administer placement tests in reading, writing, and math. Results are used both to determine the need for remediation and to place students in the appropriate course in a sequence (such as college algebra, pre-calculus, calculus).

We have rather complete information on the placement tests used by CUNY and some of the other colleges in the metropolitan area and across the state.¹² That information suggests that those placement tests are not very well aligned with what students have been studying in their high school classes. The two most commonly used tests are COMPASS, a test developed by ACT, and ACCUPLACER, a test developed by the College Board. Both tests are computer adaptive – which means that students answer different sequences of questions depending on level of difficulty of the questions they get right or wrong. According to the test design principles, this approach can allow for valid determinations of student skill level on the basis of a very limited number of questions (Achieve 2007).

Those two tests were included in a study released by Achieve in 2007. Achieve concluded that the reading tests included “less challenging passages that are more in line with

the kind of reading done in middle school and early high school” (p. 13). About the math tests, they concluded: “The algebra content assessed tends to favor pre-algebra and basic algebra over the advanced algebra concepts and skills essential for college readiness and placement into College Algebra.” And furthermore, the tests are “narrow and do not reflect the full range of content . . . college students need in a wide variety of courses” (p. 26).

While the ACCUPLACER reading test is arguably worse than COMPASS, neither of them provides any convincing evidence that those who pass, especially those who score at or just above the cut points, are ready for success in college courses. Nor do the tests provide any convincing evidence that those who fail, especially those who score just below the cut points, cannot succeed in college-level coursework.¹³ In addition, they provide no useful diagnostic information to those who want to design effective instruction. And furthermore, they effectively convey to those who take the tests a distorted illustration of what college reading looks like. Put simply, college students are not usually asked to read very short passages and to guess at what they might mean. Instead, they’re asked to read lengthy essays and books and to work through what they might mean.

Student performance on the placement tests probably does reveal significant shortcomings of their knowledge of material they should have learned many years earlier. On the one hand, this suggests that high school graduates who take the placement exams are not necessarily being assessed on their performance with the work they have been doing in the latter part of their high school studies and, thus, it

¹² CUNY uses a direct measure of writing. In other words, students have to write an essay, which is scored holistically. Achieve’s 2007 report concluded that such direct measures were preferable to “indirect” multiple-choice models. While there are problems and challenges associated with the writing assessment, they are not as severe as those associated with the multiple-choice reading and math assessments.

¹³ The Achieve researchers were not able to determine a level of text difficulty for the passages on the ACCUPLACER test because the passages were too short.

means that the placement tests do not necessarily indicate whether a student is currently ready for success in college-level work.

In light of the problems associated with the Regents exams and the shortcomings of the placement tests, it seems clear that we do not have very solid alignments upon which to base college readiness work with students.

High-Quality Advisement and Powerful Supports for College Going

There is significant evidence that graduates of the city's schools who intend to go on to college have confronted many challenges in the process and have not been provided the kind of advice and support they need.

An Urban Youth Collaborative survey of high school students¹⁴ found that:

- 61 percent of students in large schools and 69 percent in small schools on large campuses said they were never, rarely, or sometimes able to see a guidance counselor when they needed to;
- 66 percent of students in large schools and 50 percent in small schools on large campuses said they were never, rarely, or sometimes able to get help at school when they had questions about college;
- 64 percent of students in large schools and 43 percent in small schools on large campuses said they never, rarely, or sometimes could get help when they had questions about what they needed to graduate.

Lori Chajet and Sierra Stoneman-Bell (2008-2009) wrote:

Although nationwide, schools and community-based organizations are encouraging students to apply and go to

college, few institutions are confronting just how challenging the process is for low-income students who will be among the first in their families to attend. (p. 41)

After acknowledging that many schools (in New York City) are committed to the success of their students, they commented:

When it comes to the college search and application process, even the best of these schools often forget what they know to be most important to teaching and learning. Rather than using student-centered, inquiry-driven, experiential approaches, they resort to telling students what they need to know and then expect them to follow the necessary steps to get into college. (p. 41)

With that as backdrop, let's explore some of what is currently being done to support students more effectively.

New York City Department of Education

As part of a recent reorganization at NYCDOE, the responsibility for developing and implementing postsecondary readiness and success activities has been placed in the Office of Teaching and Learning. The priorities for the new work have been identified as:

- enhancing academic preparation for postsecondary study and work
- developing multiple accountability measures related to preparedness
- strengthening college awareness and planning activities
- conducting research on all aspects of college readiness

It appears that NYCDOE is attaching significantly greater importance to postsecondary readiness and has acknowledged the need to

¹⁴ Results from the survey Youth Talking to Youth: Safety at Your School were presented at an Urban Youth Collaborative conference on October 18, 2005. The survey was conducted by the Urban Youth Collaborative with support from Kaviitha Mediratta and colleagues of the Community Involvement Program, then affiliated with New York University, Institute for Education and Social Policy, and since 2006, affiliated with Brown University.

enhance its work in that area. This is a significant new development within NYCDOE, in light of the relative lack of attention to such matters in recent years.

In addition, within the last year, NYCDOE has made substantial efforts to enhance its Career and Technical Education (CTE) programs and schools. This work was given considerable visibility when the mayor's office convened the Mayoral Task Force on Career and Technical Education Innovation and when that group issued its report in July 2008. Among other recommendations, the report included an embrace of the need to prepare students in CTE programs and schools with the competencies needed for success in postsecondary education. These competencies were defined as follows:

The demands of various programs typically vary according to the nature of the coursework required for completion. By way of example, programs that have a significant engineering component will require greater proficiency and more extensive course taking in mathematics than programs in human services. The specification of the necessary competencies will therefore have to be made at the level of the program of study rather than the institution. This will require extensive consultations and agreements with knowledgeable representatives of the actual institutions as a starting point for implementation efforts.

However, in general, graduates who enter a program at the certificate, associate's degree, or bachelor's degree levels should be prepared to enter into fully

credited coursework with no need for remediation in reading, writing, or math. Graduates also should be sufficiently well prepared so that they are able to complete an associate degree in no more than three years or a bachelor's degree in no more than six years. (Mayoral Task Force on Career and Technical Education Innovation 2008, p. 54)¹⁵

Since the release of the report, NYCDOE has approved the opening of four new schools and the conversion of an existing school into CTE demonstration sites. All of the sites have strong postsecondary connections.

The key challenge for NYCDOE will be the extent to which centrally initiated efforts make their way into what might be considered the deep structure of the everyday life of high schools. In an empowerment context, where principals are responsible for most aspects of educational decision making, the challenge of doing so is not insignificant. This suggests

the need to ensure that all high school principals are fully informed about issues related to college readiness so that their decisions, no matter how varied, are consistent with a set of coherent principles on college readiness.

NYCDOE is working very closely with CUNY, and the two institutions have established a College Readiness and Success Working Group (see the section Building a College Readiness System: Data Systems, Research, and Evaluation on pages 42–43).

¹⁵ The author of this report served as the CUNY chancellor's representative on the Mayoral Task Force and recommended the language cited.

Graduates of the city's schools who intend to go on to college have confronted many challenges in the process and have not been provided the kind of advice and support they need.

City University of New York

CUNY has a long track record of working with the public schools to promote student readiness for college. Those efforts include the sponsorship of a large number of affiliated schools and thirteen early-college schools with an explicit focus on college success. In addition, the university has a number of projects and offices that address issues of college readiness more broadly.

At Home in College. At Home in College is a Robin Hood Foundation–funded college transition program that works with 200 high school seniors from seven New York City public high schools and 100 students from CUNY GED programs. The immediate goal of the project is to increase the college enrollment and retention rates of these students and, ultimately, their college graduation rates. At Home in College offers each participating high school student:

- transition math and English courses intended to prepare students for the CUNY placement exams and success in college credit courses;
- fee waivers for the CUNY application;
- college access activities, including help with completing online college applications, filing for financial aid, college visits, learning about different careers and programs of study, and enrolling in college;
- advisement and other assistance during the first year of college if participating students enroll at a partner CUNY community college.

Middle Grades Initiative/GEAR UP. Consistent with the purposes of the national GEAR UP effort, the Middle Grades Initiative (MGI) focuses its efforts on schools with large numbers of low-income students. In 2008-2009, thirteen schools were partnering with five colleges. All the participating schools have student populations where more than half the students qualify for free or reduced-price lunch. MGI student services include school-based tutoring, advising and counseling, early college awareness, and arts education programs. MGI students receive academic and advisement services as they transition into the high school grades so they will be prepared for the College Now program. The program also includes a substantial parent outreach component intended to secure parental/guardian involvement in and support for their children’s academic success. MGI objectives include a commitment to the significant involvement of minority males to ensure that they remain engaged in school and focused on future college success, especially readiness for college credit courses in College Now.

Admissions Services. While CUNY’s Office of Admissions Services is primarily responsible for recruitment activities and ensuring that individuals complete their applications, it also provides assistance to individual applicants during visits to schools and at its office locations in Manhattan and maintains extensive relations with guidance counselors and college advisors. In addition, admissions offices at all of the university’s undergraduate institutions provide similar services, especially to schools considered to be “feeder” schools.

External Organizations

A number of external organizations have put high priorities on placing issues of college readiness at the center of their work with schools or students.

Advancement Via Individual Determination (AVID). A number of the city's public high schools have adopted the AVID program. AVID, initially established in California, emphasizes the need to combine the desire to go to college with hard work. Students are registered in demanding classes, such as honors and AP, and in a special AVID elective. For one period a day, they learn organizational and study skills, work on critical thinking and asking probing questions, get academic help from peers and college tutors, and participate in enrichment and motivational activities that make college seem attainable. The AVID curriculum was developed by middle and senior high school teachers in collaboration with college professors. AVID programs also engage parents through participation in advisory boards, regular meetings, and regular contact with the AVID coordinator.

College Access Consortium of New York. The College Access Consortium of New York was created in 1989 as an informal network of community-based organizations involved in helping students get into college and apply for financial aid. Currently, its members also include colleges and high schools. Members meet regularly to exchange information about individual colleges and their admissions requirements, scholarships, openings for SAT prep courses, strategies for counseling students, and other subjects that enable them to better serve their students. To

date, over 100 schools, colleges, and community-based organizations belong to the consortium.

College Board Schools. College Board Schools in the city enroll students in grades 6–12. Students are not screened for admission. College Board Schools utilize all of the college readiness programs and services of the College Board (SpringBoard, CollegeEd, the PSAT, the SAT, MyRoad, and AP). The College Board also provides extensive professional development opportunities for teachers and other professionals in the schools.

College Summit. College Summit builds the capacity of schools to increase the number of students who advance to college. Its core activities include: a postsecondary planning course for all seniors; professional development for teachers and counselors to lead the course and build a college culture in the classroom; the training of peer leaders to forge a college-going culture; and using data to manage college enrollment progress. Approximately forty New York City high schools have become College Summit partners.

New Visions for Public Schools. The Citi College Bound program, made possible through the support of the Citi Foundation, provides New Visions schools with the support and resources they need to build and

A number of external organizations have put high priorities on placing issues of college readiness at the center of their work with schools or students.

sustain strong college-bound cultures. The Citi College Bound Program seeks to build sustainable capacities at small schools and campuses in developing and implementing a schoolwide college-bound culture; provide targeted professional development; strengthen relationships between small schools and colleges; document and disseminate materials and best practices; and promote widespread acceptance of the value that “College Is Possible for Every New York City Student.”

Partnership for After School Education. The Partnership for After School Education (PASE) has established the Middle School as Preparation for Success (MAPS) initiative. MAPS works with afterschool programs to enable them to motivate middle school youth and help them understand that decisions they make today will have a large impact when it comes time to apply to college. Through organizational consultations, the placement of college-age mentors, a series of workshops, and a citywide forum, MAPS communicates information, strategies, tools, and resources on effective college preparatory program practices, while offering opportunities for networking and peer-to-peer support. In 2007-2008, in partnership with Time Warner, PASE worked intensively with fourteen community-based organizations to build their capacity to offer high-quality college preparation programs for underserved and diverse youth. PASE is currently completing the publication *Guide to Effective Afterschool College Prep Programs*.

Urban Assembly. Students at Urban Assembly schools participate in a sequence of activities that emphasize the accessibility and importance of a college education. Ninth- and tenth-graders visit CUNY and SUNY campuses, as well as private colleges. College admissions officers conduct a range of workshops at Urban Assembly schools targeted to students in different grades and to their parents, offering information and advice about every aspect of the admissions process. Its college planning and advising program is based on research, the experience of successful New York City public school college advisers, and the programs of private high schools. Principals, teachers, and college advisers at each school are trained to ensure that every student understands and follows the college preparation and admissions process and to introduce and promote their school to college admissions officers. The Urban Assembly also cultivates relationships with colleges and universities where New York City public school students have thrived and helps forge connections with universities and colleges that best match the needs and interests of their students.

Young Women’s Leadership Foundation. The Young Women’s Leadership Foundation has established a College Bound Initiative that provides services and supports to students beginning in the middle school grades and continuing into the college years. The initiative’s activities include: early college awareness activities such as college trips and fairs; application, financial aid, and enrollment support (including PSAT and SAT preparation, financial aid counseling, counseling on college choice, systematic monitor-

ing of the application process, advocacy with college admissions offices, and parent education and outreach); and alumni support (including campus visits by the alumni coordinator and assistance to alumni in job searches). In 2008-2009, the initiative was working with almost 5,000 students in nine New York City schools.

Student Success Centers. Several Student Success Centers, sponsored by local community-based organizations, have been established at high schools in Brooklyn, Queens, and the Bronx through the work of the Urban Youth Collaborative. These centers, which rely on the direct involvement of students in the schools as peer advisors and mentors, provide students with information, assistance, and advice about all aspects of the college admissions process.

It is clear that many of the projects emphasize the same kinds of activities and services. Many of the efforts described are of relatively recent origin, and they provide evidence that the issues related to college readiness are being given much greater attention than was previously the case. Nonetheless, it is likely that the combination of the complexity of the processes and the lack of real understanding of those processes by many students, parents, and high school staffs results in a reliance on giving out information rather than cultivating deeper understandings. It also results in a great deal of time and effort being spent on trying to fix problems that a coherent system could prevent in the first place.

Opportunities to Learn

College Prep Courses

In light of what's been discussed in this report, it's essential that all high schools afford all their students the opportunity to take a robust program of college preparatory classes. In order to do so, they need teachers who are prepared to teach higher levels of mathematics (through calculus) and at least four different science subjects (biology, earth science, chemistry, and physics). They need teachers who are knowledgeable about and sensitive to the need to teach to higher levels of understanding (such as those that are described in the American

Diploma Project's work). However, the combination of the dramatic expansion of small high schools over the past seven years and the ongoing challenges associated with recruiting and retaining highly qualified math and science teachers have made it difficult for many schools to secure the teaching capacity they need.

In addition, it is likely that the availability of more advanced courses is dependent upon a minimum number of students who are prepared to take them. As Clara Hemphill and her colleagues (2009) argue:

Poor children, particularly children of color, have a better chance of taking academically challenging courses at mid-size schools than either at very small or very large schools, according to national research by Valerie Lee at the University of Michigan and Douglas

A great deal of time and effort is spent on trying to fix problems that a coherent system could prevent in the first place.

¹⁶ JMAP is a nonprofit organization launched during the 2003-2004 school year. Its resources are being utilized by teachers at more than 125 New York City high schools and middle schools. For more information, see <www.jmap.org>.

¹⁷ Steve Watson, personal communication, April 10, 2009.

Ready at Teachers College. Small schools have limited course offerings, while at very large schools, students from high-income families tend to be assigned to the accelerated classes. Lee and Ready say mid-size schools – those with enrollments between 600 and 900 – offer poor children the best balance between equity and opportunity, that is, a wide range of courses and the opportunity to enroll in them. In New York City, many mid-size schools offer only low-level courses because they serve predominately students who enter ninth grade in need of remediation. Schools that serve a mix of children of different abilities, however, give bright students who may have done poorly in middle school the opportunity to take advanced courses if they catch up. A successful model is the “educational option” schools which admit children according to a formula designed to ensure that 16 percent of students have below average test scores, 68 percent have average test scores and 16 percent have above average. “Educational option” schools work best when they have a critical mass of strong students.

Catch-Up Models

It’s also necessary to ensure that, if and when students realize they are not going to be ready for college and might very well wind up enrolled in remedial classes, they have the time and the opportunity to do something about it. Within the existing assessment system, there are a number of benchmarks that, in fact, signal this reality to students – specifically, the

grades they obtain on the math and English Regents exams. Students who have not obtained a 75 on those exams should assume that they are not proceeding on an effective college pathway (even if they’re not planning on attending a CUNY college) and should be attempting to do something about it. They can also prepare to take the appropriate Regents exam a second or third time to attempt to raise their score.

This strategy has received direct encouragement and support from JMAP, the Jefferson Math Project, launched by teachers in the Jefferson High School campus in Brooklyn.¹⁶ According to Steve Watson, one of the founders of JMAP, teacher knowledge regarding the importance of obtaining a 75 is fairly widespread across high schools, and many students are encouraged to retake the exam if they scored below 75, but there are no statistics available.¹⁷

Since its inception almost thirty years ago, the College Now Program has included the offering of non-credit remedial courses in its programs for high school students. In recent years, the program has been developing an alternative model for the development of skills and knowledge. The new model includes “Foundations Courses,” designed to introduce students to the ways of learning and thinking associated with different academic disciplines and to provide them with opportunities to enhance their skills in those contexts.

An example of what this looks like is the work of the Bronx Center for Teaching Innovations. BCTI fosters effective teaching practices

through college–high school collaborations by inviting teachers of Bronx small schools to form curricula-based teams, as well as interdisciplinary study groups with faculty of Bronx Community College, Hostos Community College, and Lehman College. One of the primary goals of BCTI is to promote students’ academic curiosity and interest in the real-world applications of quantitative and scientific reasoning and to encourage the use of inquiry-based learning and applied learning projects. BCTI has collaborated with twelve schools in the Bronx on the development and implementation of two courses:

- An eleventh-grade college algebra course, modeled after a college-level course, that is a pathway to an appropriate credit-bearing mathematics course offered through the College Now program. The participating teachers are supported through curriculum development meetings in which they share strategies and best practices with their colleagues and college faculty.
- A ninth-grade, skills-building, conceptual physics course that was developed by a team of teachers working with science education faculty at Lehman College. The purpose of this course is to strengthen math, graphing, and writing skills to prepare students for their high school science sequence. This team meets regularly to hone the pacing and content of this pilot course.

According to Eric Hofmann of the College Now program, enrollments in Foundations Courses and other discipline-based, non-credit courses are currently averaging between 350 and 450 per semester.

In addition, just recently, CUNY’s new At Home in College Program has enrolled approximately 200 seniors in six high schools in transitional math and reading/writing courses during the spring 2009 semester. Those courses have been designed to help students rethink their understandings of how language and math work in the context of preparing to enroll at a CUNY community college in the fall of 2009.

These efforts, while promising, are currently limited in scale and reach only a portion of high school students who may need these opportunities.

If and when students realize they are not going to be ready for college and might very well wind up enrolled in remedial classes, they need the time and the opportunity to do something about it.

4 What should be done?

We need to improve the effectiveness of the “college readiness system,” and we need to enhance the college readiness of individual students. They are not unconnected. In all likelihood, student achievement will be improved if and when students, their parents, and the staffs in the schools the students attend have a better understanding of what they should be doing – which will only be possible if the readiness system functions better.

Clear Signals

Students, parents, and high school staffs need easy access to high-quality information about all aspects of preparing for and making the transition to college. They need a wide variety of opportunities to understand what might be so different and so much harder about college – to visit college classrooms, take college-level courses, read through course descriptions, try out assignments, and talk with faculty and students. They also need opportunities to ask questions, describe what their own assumptions are, and have their views accorded a respectful understanding.

We should not assume that teachers already know what they need to do to prepare their students. It is likely that many teachers, especially newer ones, simply do not have sufficient familiarity with the kinds of challenges their students will face when they go on to college or the kinds of developmentally appropriate content and assignments they can use to enable students to acquire the knowledge and skills they need.

During the interviews with CUNY faculty and staff, the interviewees were quite insistent that they did not intend to point fingers at their high school counterparts. Instead, they expressed a good deal of sympathy for the challenges they were dealing with. A number of them articulated their strong support for expanded opportunities for faculty from the colleges and teachers from the schools to engage in ongoing contacts with each other as a way of ensuring common understandings of what was necessary for students to be successful.

There should be regular opportunities for high school teachers and their counterparts in post-secondary institutions to meet and share experiences and ideas. In addition to meetings, high school teachers and college faculty would benefit from visiting each other’s classrooms, exchanging assignments, and jointly reviewing student work.¹⁸

A College Readiness Index

Consideration should be given to the development of an overall readiness index so that students, parents, and school staff could have a practical way to assess how well the courses students are taking and the grades they are earning are keeping them on the pathway to college. What such an index might look like is depicted in Figure 12.¹⁹

In addition to providing useful guidance regarding the progress of individual students, it should be possible for schools to aggregate the data and assess how well they are doing in terms of preparing all their students for college. A school inquiry team could review the overall academic achievement of its graduates for the last two years. It could then work backwards to determine the trajectories that students who

¹⁸ A recent New York City project that brought high school and college teachers together in this fashion was *Looking Both Ways*. For information, see <www.lbw.cuny.edu>.

¹⁹ New Visions has prepared and distributed a parent guide, *Aiming Higher: Is Your Ninth-Grader on Track for College?* that includes a similar approach to keeping track of courses and grades.

Figure 12.
Sample overall college readiness index

Very well prepared	Students who take and pass more than a full load of expected courses, earn grades of 90 or better, and obtain SAT scores of 550 or over on each test
Moderately well prepared	Students who take and pass a full load of expected courses, earn grades of 85 or better, and obtain SAT scores of 500 or over on each test
Minimally prepared	Students who take and pass 90 percent of expected courses, earn grades of 75 or better, and obtain SAT scores of 480 or over on each test
Relatively underprepared	Students who take and pass 75 percent of expected courses, earn grades of 65 or better and are determined to need only one remedial course
Very underprepared	Students who take and pass less than 75 percent of expected courses, earn grades below 65, and are determined to need two or more remedial courses

NOTE: This index should not be interpreted as being equivalent to the likelihood of admission to a particular college. Admissions decisions properly take into account other information regarding applicants (extracurricular activities, personal circumstances, recommendations, etc.).

arrived at different destination points had followed to attempt to identify any key moments where a different course enrollment or a different grade seemed to contribute to a significantly different outcome. These kinds of reviews could be used with teachers and counselors, as well as with students and parents, to ensure that everyone involved understood the rationales for the advice they gave or received and the importance of the decisions they had to make.

Aligned Standards and Assessments

Regents Exam Reform

The first and most important task is to make the process by which exams are constructed and scored as transparent and clear as possible so that everyone who has a stake in the outcomes of the exams understands what different

scores mean. The cluster of misunderstandings and suspicions regarding the Regents exams must be addressed. NYSED should attempt to develop a clear measure of the performance required to signal college readiness on the exams. To the extent that teachers, students, and parents think that obtaining a passing score on the Regents exams more or less corresponds to meeting the standards for high school graduation and, furthermore, that meeting the standards for high school graduation more or less corresponds to being ready for college, we have a profoundly mistaken and disorienting situation to deal with.

The cluster of misunderstandings and suspicions regarding the Regents exams must be addressed.

²⁰ Seven community colleges in Florida are piloting the use of scores on the Florida Comprehensive Assessment Test as a way of exempting students from remediation. Students who score at the top two proficiency levels do not need to take the placement tests. By way of comparison, students only need to score at the second-highest level to meet the high school graduation standard.

Therefore, the second task should be to add a college-ready standard to the existing scores. It needs to be remembered that NYSED only recognizes three scores as benchmarks of different levels of achievement – 55 for a low pass (and this is in the process of being phased out), 65 for a regular pass, and 85 for a pass with distinction. A 75 is recognized by CUNY and some other colleges as signaling exemption from remediation. NYSED should consult with CUNY and SUNY staff to determine what should be a formally recognized score to signal readiness for introductory college work – on the basis of reviews of actual student performance with different grade patterns.²⁰

Additional work will have to be done in math because there is no data yet available regarding the college performance of students with different grades on the three new math exams. It might also be appropriate to consider extending the college readiness standards to the Regents exams in subjects beyond English and math.

Alignment with College Placement Tests

Given the serious misalignments between what high school students should be doing in eleventh and twelfth grade and the actual demands of placement tests, we do not recommend early placement testing of high school students. Instead, if there is interest in providing students with additional information regarding their readiness and/or possible need for remediation, an adaptation of what the California State University system has done should be considered. The Early Assessment Program (EAP) is a collaborative effort among three state entities: the California State University (CSU), the California Department of Education (CDE), and the California State Board

of Education (SBE). The goal of the partnership is to ensure that college-bound high school graduates have the English and mathematics skills expected by the state university.

The EAP tests are augmented California Standards Tests (CSTs) in eleventh-grade English and mathematics, which are part of California's public school testing and accountability system and are required of all students. The augmented tests were developed by CSU and K–12 faculty, who made sure that both the California high school standards and the CSU placement standards were covered. The faculty added a writing sample to the English CST, as well as a few more test items, but they kept the time needed for testing to a minimum (California State University n.d.[a]).

After eleventh-graders take the test, they are notified whether they have either met the CSU expectations (and are thus exempt from any additional CSU placement tests) or whether they need additional preparation in order to be successful in college-level work. Those who need extra work have their senior year to prepare further. Students who need better skills in expository reading and writing can take a specially designed twelfth-grade course, developed jointly by teachers from high schools and the university.

The most useful aspects of the CSU effort are (California State University n.d.[b]):

- the process involved college faculty and high school teachers working cooperatively;
- the additional exam items are embedded within an exam the students already have to take – it does not represent the addition of a new test;

- the augmented exams are not the California high school exit exam; they are, instead, the end-of-course exams in eleventh grade;
- the timing of the assessment is appropriate – neither too soon to make sense nor too late to do something about it;
- the opportunity to enhance readiness takes place as part of the students’ regular twelfth-grade coursework – and, indeed, it ensures that at least some of the twelfth-grade coursework will be substantive;
- the expository reading and writing course is extraordinarily well-designed.

It would be especially helpful if a similar approach could be developed in New York. Nonetheless, the existing placement tests will continue to be used for the foreseeable future, and it is essential that students who have to take them are as well prepared as possible to do well on them. In light of the consequences of failure (assignment to remediation) and the somewhat strange form of a computer adaptive test, it is essential that students are aware of the ways in which the test is designed and how they can maximize their performance.

Specifically, students need to know that their knowledge will be judged on the basis of a relatively small number of items. They also need to know that each right or wrong answer has significant implications for how well they will do on the test as a whole – that each right answer will make it more likely that they will “pass” and that each wrong answer will make it more likely that they will “fail.” Therefore, they should take their time (since the test is untimed) and they should be hesitant to guess.

This communication should take the form of a comprehensive test orientation and practice session before students take the placement tests. After taking a practice test (preferably on a computer in the same format as the actual test), students should be provided an opportunity to talk through their understandings of the test and to have any misconceptions addressed. For this to be effective, it will be essential that those conducting these orientation/practice sessions be especially knowledgeable about all aspects of the test design, testing process, and score interpretation.²¹

Enhanced College Advisement

Students and parents need to have ready access to high-quality and understandable information regarding all aspects of becoming prepared for college, of making wise choices concerning which colleges to apply to, of completing all parts of the college application process in a timely manner, and, finally, of making an effective transition into college.

The matter of informed choice of colleges to apply to and of the college to enroll in is of prime importance. Completion rates at different colleges vary significantly and students should be assisted in learning more about them so that they can make choices that will be to their likely advantage. Fortunately, the Integrated Postsecondary Education Data System (IPEDS), referred to in the section on admissions standards on page 4, makes available authoritative

After taking a practice test, students should be provided an opportunity to talk through their understandings of the test and to have any misconceptions addressed.

²¹ CUNY has placed a good deal of valuable information about its placement tests on its Web page. See <<http://web.cuny.edu/academics/oa/testing/cuny-assessment-tests.html>>.

²² See <<http://nces.ed.gov/collegenavigator>>. These data are relied upon by most of the college search organizations, but the data available from the federal agency is free and free of advertising.

²³ For more information on the Posse Foundation, see <www.possefoundation.org>.

data on overall first-to-second-year persistence and graduation rates for full-time entering freshmen (within three years for associate degree students and six years for baccalaureate degree students), as well as disaggregated data for students of various races/ethnicities for all postsecondary institutions.²² Unfortunately, however, there are no data available for entering part-time students, and persistence and completion data are not available at the program level within colleges.

The information that has been included in this report, as well as a great deal of other relevant information, needs to be worked through to ensure that it is accessible to students and parents, especially those who may not have much prior experience with or knowledge about college preparation and success. But the information needs to be made “real” for students and parents by the work of high school and college staff (as well as staff from community organizations that provide college counseling). Those staff must not only be knowledgeable about all the substantive matters and all the details; they must also become effective teachers in their interactions with students and parents. Their task is not to transmit the information. Instead, it is to ensure that students and parents are able to make sense of what they hear and learn about and that they have opportunities to ask questions and to articulate their own understandings – so that misconceptions can be identified and more appropriate understandings developed.

For example, information sessions on opportunities and requirements for students and parents need to be designed in ways that promote active engagement by participants to ensure that they can, in fact, become more knowledgeable. Simply telling people a lot of things that they don’t really understand will not do much good. Of particular importance is the need to take account of the effect of parents’ previous negative experiences with schools and colleges, the limited English language abilities of some, and the difficulties that some will have with reading, especially with the reading of technical terms and complicated forms.

We recommend that these activities begin with middle school. One very important reason for beginning work in the middle school years is that the population of boys and girls remains roughly equal. The differential patterns of school success and failure and, especially, the gender-differentiated rates of dropping out, have not yet taken hold. Thus, middle school provides us with an opportunity to engage boys in early activities that might propel them on to continued progress toward college preparedness.

While it is fairly well known and acknowledged that many middle school students are reading and doing math at levels below the expected state standards and that many middle school graduates enter ninth grade significantly below necessary skills levels, the significance of this disadvantage is not well understood or appreciated. In many ways, the skills that many middle school students do not achieve mastery in are the same skills that they fail to display when they arrive at the doorsteps of college. Even though they have met the requirements for high school graduation, they remain pro-

foundly limited in their abilities to do college-level academic work, often because of what they did not learn in middle school.

At the April 21, 2009, preliminary public presentation of this research, a principal in attendance pointed out that there was no designated college counselor position in NYCDOE; nor was there funding specified for such a position. It seems clear that, depending on the size of a high school, there is a need for at least one staff member to be assigned the responsibility of working with all students to promote high levels of knowledge about and engagement with college going. Some entity, perhaps the School of Professional Studies at CUNY, should develop and offer substantial college advising seminars, designed to explore all aspects of the advising process, to school staff (both counselors and teachers), as well as to staff of nonprofit education groups, community organizations, and staff from relevant offices at colleges and universities. Such seminars could be designed to draw upon the different kinds of experience and knowledge that individuals have acquired in their different institutional settings and roles and could possibly lead to ongoing “communities of practice” wherein participants establish lasting connections for mutual learning and support. The College Access Consortium of New York (<www.cacny.com>) is an already-existing organization that functions in that manner.

Within the schools, we would second the recommendations of College Summit that high schools would be well served if they underwent a “cultural shift,” consisting of (Sagawa & Schramm 2008):

- a shift to counting college enrollment rates as a measure of high school success;

- a shift from thinking postsecondary guidance should be for *some* students to providing it to *all* students;
- a shift from a “guidance counselor only” model to a guidance counselor plus teacher-engaged effort;
- a shift from thinking of students as *recipients* of school culture to *drivers* of school culture.

The last recommendation deserves emphasis because it asks us to understand that the young people in our schools need to be imagined as a powerful resource for each other. As is commonly recognized, they oftentimes have a great deal of influence on each other. It may be that we too infrequently enlist them in the active co-construction of their futures. As the Posse Foundation’s work has demonstrated, participation in a cohort of like-minded students can make a great deal of difference in college success.²³ We should be inviting students to become members of cohorts long before they go off to college.

Finally, we should take greater advantage of the learning and communication revolution that has occurred in the digital world. More and more young people move fluently and proficiently in virtual environments that too few older adults really understand. Those environments should be prospected for ways they can be used to ensure that high school students get good information and know what to do and where to turn when they need help.

Information needs to be made “real” for students and parents by the work of high school and college staff as well as staff from community organizations that provide college counseling.

Enhanced Academic Readiness

High-Quality Teaching and Learning

What matters most is what students are expected to do day in and day out in their classrooms – starting in ninth grade, if not before.²⁴ If they are engaged in high-quality learning (characterized by demanding content, high expectations of student performance, student-centered activities, an inquiry/discovery approach to understanding, and effective support), it is more likely that they will acquire the skills and knowledge they need. This, needless to say, requires that their teachers be well prepared.

We would recommend that NYCDOE conduct an inventory of the capacity of its high schools to determine the extent to which schools have what they need to offer the number and type of courses necessary for college preparation for all students and to identify specific shortfall areas. NYCDOE should then cooperate with postsecondary institutions to develop an array of new options for the professional development of teachers in those areas.

Full Course Load

For those who are planning on going on to college, there is no way to be too well prepared. Students should always be taking the maximum number of courses permitted by the school program, especially after they have met the requirements for high school graduation. For example, if a student has earned three credits in math but has not completed the equivalent of Algebra II (currently Math B), he or she should take that course as a senior. In all likelihood, this will be a tough sell to students – especially because many students do not really see much of a connection between how

well they do in high school and how well they will do in college. The connections must be made explicit and transparent so that good advice is well received.

Higher Achievement on Regents Exams

Leaving aside the large challenges associated with the Regents exams, all students should be assisted in doing well on those exams. However, we are not talking about instruction focused on exam preparation. Students can be assisted in meeting minimum competencies by helping them use test-taking strategies, but this is a very limited intervention. For students to achieve college-ready competencies, they need to do something quite different. In a recent study on ACT test preparation in the Chicago Public Schools, the Consortium on Chicago School Research concluded that:

The focus on testing strategies and practice diverts students' and teachers' efforts from what really matters – deep analytic work in academic classes. The strongest predictor of improvements from one Educational Planning and Assessment System (EPAS) test to another is the grade students receive in the corresponding subject course. Regardless of whether they start the year with low or high test scores, students who receive higher grades in their English course show higher improvements on the English and reading subject tests; those who receive higher grades in their math course show higher improvements on the math subject test. . . . Correspondingly, EPAS improvements are higher the more that school staff are able to get students engaging in appropriate academic behaviors (coming to class, doing their homework, paying attention). Of course, it is not just

²⁴ Adelman (2006) raised one important reservation to his own enthusiasm for the potential of more-demanding coursework as a strategy for enhanced readiness. He wrote: "If students cannot read close to grade level, the biology textbook, the math problems, the history documents, the novel – all will be beyond them" (p. xxvi).

²⁵ For Ramp Up, see <www.ncee.org/acsd/literacy/index.jsp>. For Strategic Literacy Initiative, see <www.wested.org/stratlit>.

getting students to work hard that matters, but getting them to do the deep problem-solving work tested on the ACT. Students' improvements from PLAN [tests given in earlier grades] to ACT are higher the more that their teachers' instructional practices reflect "best practices" in their subject aligned with the ACT. Ironically, the emphasis on test practice takes away from instructional time that could be used for deep analytic class work. (Allensworth, Correa & Ponisciak 2008, p. 2)

Students should be assisted in obtaining high scores by ensuring that they remain engaged in their academic work, complete challenging assignments, and are provided consistent and clear feedback regarding the quality of their work.

New Ninth Grade

Students who enter ninth grade not able to proficiently read ninth-grade materials must be provided an opportunity to enhance their reading skills by the time they enter tenth grade – there is no more important priority. Schools and colleges should cooperate on the development of new pathways that combine high school and college coursework in careful and coherent sequences.

We have previously highlighted the importance of literacy skills for entering ninth-graders. For all those who enter high school unprepared to read the basic materials and to respond in writing about what they have read or to do the foundational math necessary for success in algebra, the pathway to college must begin with a new kind of ninth-grade experience. There are a number of promising models: RAMP UP, a project of the National Center

on Education and the Economy, and the Strategic Literacy Initiative, a project of WestEd.²⁵ However, in light of the order of magnitude of the challenge involved, we believe it will be necessary not simply to add an enhanced course or two to the regular ninth-grade program but to imagine a whole new approach.

Since students and parents will undoubtedly be concerned about the prospect of not completing regular ninth-grade courses, it might be advisable to adopt a competency model whereby students can earn credits toward graduation based on the quantity and quality of the work they complete. The fairly extensive use of portfolios in many city schools to collect and assess student work could be drawn upon to inform the design and development of a competency model.

New Pathways

A number of current projects and a number of others in the planning stages emphasize the potential of enrolling students in a pathway that leads from high school into college. These projects include early college schools, but the number of early colleges in the city is and will be small. A pathway is a comprehensively designed, closely interconnected series of graded (i.e., occurring along a developmentally appropriate trajectory) and carefully structured learning experiences that lead from a beginning to a clearly defined end associated with the achievement of college-level competencies.

Students who enter ninth grade not able to proficiently read ninth-grade materials must be provided an opportunity to enhance their reading skills by the time they enter tenth grade.

²⁶ At the April 21, 2009, presentation, Pedro Baez of Lehman College observed that there was no more powerful way for high school students to understand what college courses were like than to actually take one through dual enrollment programs such as College Now.

The pathways would be designed to ensure that students at different places (such as over-age students, students entering ninth grade unprepared to commence high school-level work, students who do not earn sufficient credits to be promoted from one high school grade to the next, students with family responsibilities, etc.) were successful in completing key introductory college courses (college algebra and English composition) or their equivalents for students pursuing CTE options (for example, introductory applied mathematics and technical writing) by the time they graduated from high school or by the time they obtained a high school equivalency diploma.

Eligibility for enrollment in the college credit or AP courses included in a pathway could be determined on the basis of performance in the pre-college courses included in the pathway. This would allow high schools and colleges to effectively address the alignment issue before students get to college – at least insofar as that alignment issue presents itself in math and English.

Accelerated Learning Opportunities

Previews of College-Level Work

We believe that the most appropriate way for students to understand what they will have to do in college is to see genuine examples of college texts, assignments, and grades.²⁶ Adelman (2006) has strongly endorsed the value of the work completed by Achieve. In *The Toolbox Revisited*, he wrote:

The American Diploma Project (Achieve 2004) pushes beyond general knowledge-objectives to include samples

of college assignments (e.g., profit-maximizing output analyses in microeconomics, pH calculations for a complex solution in introductory chemistry, an essay assignment on Plato's distinction between thinking and belief in introductory philosophy) and workplace tasks (e.g., a bank loan officer's assessment of an application from a corporation for \$1.7 million to purchase two corporate aircraft, a report requiring measurements of DC supply voltage for diffusion furnaces in semiconductor manufacturing and analysis of furnace regulator modification costs, and the determination of dosages in an insulin therapy regimen). These are superb examples of digging below the credit count to the stuff of learning. . . .

The sample assignments and examination questions selected signal precisely the kind of learning expected of the bulk of the nation's postsecondary newcomers. Such assignments and questions provide clear expectations for students entering community college occupational programs as well as those moving into the general education portions of postsecondary education. The microeconomics problems come from a community college, the chemistry from a research university.

In fact, it could be argued that these *previews* of lower-division postsecondary learning objectives and tasks should be part and parcel of eleventh- and twelfth-grade curricula, equally accessible to students intending traditional lines to a bachelor's degree and those following career and technical education paths. [Emphasis added.] (p. 98)

While the opportunity for high school students and teachers to “see” genuine college course assignments would be very valuable, it would be even more valuable if those exposures could be accompanied by opportunities to have substantial conversations with college faculty – so that the assignments would not simply stand on their own but, instead, could be understood in terms of the thinking of the faculty who came up with those assignments. Indeed, it might turn out that the faculty would realize that some of their expectations needed to be reconsidered.

This last comment is connected to another issue that has attracted attention – the extent to which introductory college courses reflect what might be considered the most promising practices in curriculum and instruction in college-level coursework. When Conley developed his framework for understanding college readiness, he insisted that it was only reasonable to prepare students for what he referred to as best-practices college courses. He has acknowledged that the widespread availability of those courses in postsecondary institutions cannot be taken for granted.

Currently, he is working in Texas to develop “college reference courses.” According to Conley, a reference course is a “hypothetical course set at a sufficiently high challenge level to ensure readiness to pursue additional studies in the subject area.” In other words, the reference course is not intended to be taught as such but is intended to serve as a powerful model against which real courses can be evaluated and possibly redesigned.

At the same time, the reference course project is intended to result in enhanced conversations among college faculty (including those who teach remedial courses) and high school teachers regarding the elements of college readiness. The next phase of the project will lead to the development of student projects and rubrics that can be used in high schools, developmental education, and entry-level college courses to determine college readiness.

Advanced Placement

A number of subsequent analyses, especially those conducted by the College Board as part of its advocacy effort, extol the importance of the AP program to preparing students for success in college.²⁷ Adelman made clear in his study that he had not found that AP coursework made an

independent contribution to college readiness and that AP was only a component of the overall Academic Curriculum Intensity Index. Kristin Klopfenstein of Texas Christian

University has subsequently conducted a number of studies of participation in AP and has concluded that “for the average student, regardless of race or income, AP experience does not increase the likelihood of early college success beyond that predicted by the non-AP curriculum” (Klopfenstein & Thomas 2006).

In other words, students who do well in AP courses have largely had the benefit of an otherwise strong academic program. Therefore, what students need first is a strong academic program. With that in place, AP is a valuable

²⁷ For more information, see the College Board AP Central Web pages at <<http://apcentral.collegeboard.com/apc/Controller.jspf>>.

We believe that the most appropriate way for students to understand what they will have to do in college is to see genuine examples of college texts, assignments, and grades.

²⁸ For more on this, see the Executive Summary of a National Research Council Report, which can be downloaded from the page containing the full report at http://books.nap.edu/openbook.php?record_id=10365&page=1.

supplementary learning opportunity. The recent efforts to expand AP participation at NYCDOE may be yielding more promising results.

In any case, the work of the College Board in supporting the development of grade 6–12 schools where a careful sequence of courses has been designed to culminate in a substantial amount of AP course taking and other accelerated learning opportunities is a very different matter and is clearly one of the current efforts that most directly takes on the challenge of preparing students for success in college.

Dual Enrollment

Adelman noted that participation in dual enrollment programs had grown dramatically since his initial *Toolbox* study, and he suggested that it might have some potential for improving student readiness. In a recent study that examined dual enrollment outcomes in Florida and New York, researchers from the Community College Research Center at Teachers College concluded that participation in dual enrollment had the following positive outcomes (Mechur Karp et al. 2000):

- an increased likelihood of enrollment in a four-year college;
- an increased likelihood of persistence in college two years after high school graduation;
- higher GPAs three years after high school graduation;
- greater credit accumulation three years after high school graduation.

In addition, research conducted by staff of CUNY’s collaborative programs has concluded that participants in College Now who enroll at CUNY colleges benefit from that participation in terms of credits earned during the first year,

higher GPAs, and persistence to a third semester of enrollment (Michalowski 2007).

At times, the suggestion is made that college credit courses offered through dual enrollment programs lack quality in comparison to the consistent standards that are characteristic of the College Board’s AP program. Most important, many people have argued that the AP exams themselves constitute an impeccable quality-control mechanism. And, indeed, the College Board has developed and implemented a remarkably high-quality program of test development and test scoring. At the same time, especially in the case of math and science, the program relies on a somewhat limited model of learning and understanding that emphasizes breadth of coverage rather than depth of understanding.²⁸

Part of the difference between AP courses and dual enrollment courses is that the AP courses are fundamentally organized around the need to cover a great deal of material in order to prepare students for the AP exams, which are based on fairly traditional notions of introductory college courses. By way of comparison, faculty members teaching dual enrollment courses have some greater flexibility in imagining different ways of designing introductory college courses. They can draw upon the resources collected in departmental expertise and upon interesting alternatives to the traditional introductory courses.

In any case, we recommend that schools provide students with an array of appropriate opportunities to take advanced courses. Decisions regarding the appropriateness of either AP or dual enrollment or both should be made at the school level after reviewing data on student characteristics and prior student performance in different types of courses.

Improved Transitions

The process of applying to college and for financial aid should be made as user-friendly as possible – at the high schools and the colleges. There should be as much support as necessary to ensure that students complete all the required forms and information in a timely manner. There should be no surprises. Students should be provided assistance and guidance throughout the summer between high school and college.

It's increasingly clear that what happens when students actually start college has a very powerful effect on how well they do – even if they are not as well prepared as they should be. Staff members of CUNY's collaborative programs have suggested that we need “student-ready colleges” as much as we need “college-ready students.”

In that light, a number of the CUNY faculty and staff who were interviewed for this research said they thought that faculty needed to become more knowledgeable about the circumstances of students' lives and their experiences and about their assumptions, and they needed to reconsider their instructional practices and expectations in light of that knowledge. Interviewees suggested that the students' ideas needed to be taken seriously and that students needed opportunities to reflect on those ideas so that they might become more self-critical thinkers.

Several faculty members also suggested, in ways that were consistent with Conley's (2007) recommendations, that students needed to acquire a sense that college could prove to be an especially exciting time in students' lives and that the hard work needed to succeed would come to be seen as something well

worth the effort. For many students, this acquisition of a sense of being a college student would require high expectations and strong support from the entire college community. In light of their relative lack of readiness, this would mean that students would have to be able to make some mistakes along the way – without consequences that would lead them to internalize a sense of failure and discourage them from persisting.

In the end, colleges that accept students – even those who are not ready – have an obligation to do whatever they can to promote their success. This does not mean that those students have no responsibility for what they do or how well they do. It does mean that they should not be expected to be completely self-reliant at the beginning. (See sidebar on page 42 for a description of a promising program at CUNY.)

Strong transitions can and should enable students and college faculty and staff to learn about each other and to develop productive strategies for success. The ongoing planning for a new community college at CUNY – which has an explicit design principle about the importance of initiating the relationship between the college and its prospective students well before they matriculate – should be especially helpful in imagining improved ways for students to make this difficult transition.

There should be no surprises. Students should be provided assistance and guidance throughout the summer between high school and college.

CUNY's Accelerated Study in Associate Programs

The Accelerated Study in Associate Programs (ASAP), which began in 2007,* is showing early signs of success. The program, funded by the Mayor's Center for Economic Opportunity, has a goal of graduating at least 50 percent of its initial cohort of 1,000 students in three years. Program features include required full-time study, free tuition, free textbooks, and funds to cover public transportation costs. ASAP students take courses in smaller, blocked classes. The students also receive intense personal advising and tutoring.

If current projections hold steady, the program could graduate 60 percent of its initial cohort by September 2010. By comparison, CUNY's most recent three-year graduation rate for full-time, non-remedial students (those who entered in the fall of 2004) was 24.6 percent. Last fall, the program retained 80 percent of its students from the first year to the second. A comparison group of non-remedial students in 2006 had a fall-to-fall retention rate of 59.7 percent.

Though ASAP students have significantly higher retention and graduation rates than comparison groups of similar students, they have only slightly higher grades. At the end of the program's first year, ASAP students earned an average of 25.8 credits with a grade-point average of 2.6. Those in the comparison group (of full-time, non-remedial students after the 2006-2007 academic year) earned an average of 24.7 credits with a grade point average of 2.4 (Moltz 2009).

ASAP was built upon many different campus-level efforts to improve student achievement, persistence, and graduation. Earlier efforts included paired courses, learning communities, pre-freshman summer intensive programs, and freshman-year programs. Beyond ASAP, CUNY has initiated planning for a new community college, which is intended to have a whole-college design more conducive to promoting student success. Overall, the program is a commendable demonstration of what colleges can do for their students and what students are capable of, with such support.

For more information, see <<http://web.cuny.edu/academics/academic-programs/programs-of-note/asap.html>> and <www.nyc.gov/html/ceo/html/programs/cuny_asap.shtml>

* NOTE: The program initially enrolled students with no remedial needs. It will enroll students who need remediation in one subject in 2009-2010 as a way of testing the efficacy of the model.

Building a College Readiness System

Data Systems, Research, and Evaluation

NYCDOE and CUNY have taken a major step forward by establishing a College Readiness and Success Working Group. The two institutions have developed a comprehensive data-sharing agreement to allow for collaborative inquiry into the relationship between high school and college performance. This aspect of collaborative work between the two institutions is still in its early phases, and it would be premature to predict what its outcomes will be. It is, however, clear that data will be most illuminating if they are examined at the right levels – levels where teachers and faculty might be able to do something to change things. These are the levels of academic subjects and disciplines, of courses and departments, of schools and colleges. The more specific the data are, the more likely they will lead to necessary changes.

Consistent with some of the college readiness accountability principles espoused by Achieve cited previously in this report, College Summit has also made some useful recommendations regarding the use of data (Sagawa & Schramm 2008):

- Make college enrollment, persistence, and completion rates by high school reliable and publicly available.
- Make college proficiency rates (the percentage of the high school graduating class that persists to their second year of postsecondary education) a key success measure of high schools.

Establishing a Citywide Working Group

We have outlined a fairly ambitious agenda. The need is great and the number of issues that need to be sorted out is large. The development of a system that is adequate to the task will not occur if it is left to chance. Therefore, we recommend the establishment of an expanded Citywide Working Group, which would be composed of representatives of NYCDOE, CUNY and other college institutions, NYSED, not-for-profit education groups, and community organizations to conduct a thorough assessment of the current state of affairs, draw upon the best of existing models and practices, and develop recommendations for policies, procedures, inter-institutional cooperation, and, as necessary, new organizational forms.

Concluding Thoughts

This report has covered a lot of territory and has certainly left some things out. Of special concern is the fact that we have largely analyzed data regarding student readiness and success in aggregate terms. We have not looked closely at the experiences and fates of students who identify themselves as members of different races or ethnicities, of students who are English language learners, of students with special needs, of students who are undocumented residents of the United States, or of students who obtain high school equivalency diplomas (by passing the GED tests). From all indications, those individuals are less successful than the average – by far.²⁹ Their stories need to be told and effective plans need to be developed to ensure that their futures are different from what the past would predict. In all likelihood, a good deal of what we have recommended in

this report would be beneficial to individuals in these groups, but we should not imagine that it will be enough.

We will close where we began. It's a challenging world that our high school graduates will live in. We believe that it's essential for them to know more and have thought more about difficult issues before they are faced with making difficult choices. We don't think that high schools can prepare them for all that awaits them. We need people who are well prepared to be good teachers, nurses, engineers (and many other professionals), parents, neighbors, and citizens of the world. The successful completion of a college degree can make a big difference.

But then we would add one more thing. In this report, we have made almost no mention of the very large number of New York City's high school students who drop out before graduation. We know that there are many reasons why they leave. We suggest that the real prospect of success in college and a real understanding of what college might do for them could become powerful reasons for them to stay.

The need is great and the number of issues that need to be sorted out is large. The development of a system that is adequate to the task will not occur if it is left to chance.

²⁹ At the April 21, 2009 presentation, a member of the audience pointedly, and correctly, asked whether the data being collected allowed for disaggregation on the readiness and college achievement of students in these groups. While the data are available, although probably not easily obtainable, the real question is whether they are being analyzed and used.

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New York State has a long history of administering state exams. Through much of the last fifty years of the twentieth century, those tests were highly valued by teachers and those who passed them and earned Regents diplomas. However, the number who passed the required Regents exams and earned a Regents diploma was probably never that large. This led to the introduction of another battery of tests, the Regents Competency Tests, to be taken and passed by students who would obtain a non-Regents diploma. By design, those tests expected much less of students; they might be understood as New York's version of a high school exit exam that required the demonstration of minimum competencies.

Work on new standards in the early to mid-1990s was initially accompanied by the intention to introduce new performance assessments that would expect students to demonstrate their achievement of the standards by the completion of more or less authentic tasks. For a while, there was some discussion about an assessment system that might have a certain mixed character – retaining elements of the old Regents exams but adding new performance-based tasks. The early work was largely completed during the tenure of Thomas Sobol as commissioner of NYSED. His successor, Richard Mills, came to New York from Vermont, where he had presided over the development of a performance-based assessment system, and many expected that he would carry forward the work that had already been done.

The Goal: One Standard for All High School Students

It appears that Commissioner Mills, soon after he arrived in Albany, became convinced that the continued existence of a double standard approach to the award of high school diplomas was unacceptable. Eventually, he persuaded the Board of Regents to decide against the continued use of the Regents Competency Tests and to have one standard for all high school graduates. That new standard was to require that all high school students take and pass five newly designed Regents exams.

The Board of Regents specified that the passing score on the new Regents would be 65 and that students who obtained scores of 85 and above would be considered as having passed “with distinction.” The Board also decided that the new exams would be phased in – as would the passing score of 65. For a certain number of years (the specific number changed from time to time), students would be able to obtain a local diploma by obtaining a score of 55 on the required exams. Fifty-five would be considered a “low passing” score. As a result, the exams had a somewhat ambiguous character. The burden of managing the ambiguities fell to the test designers and NYSED staffers, who had to sort out issues related to content, format, wording, and scoring.

The new Regents exams were intended to reflect the previously adopted learning standards. However, those who had been involved had crafted the standards in ways that were not easily separable from the introduction of performance-based assessments. As a result,

the form and content of the exams frequently seemed to have been constructed on the basis of a relatively superficial understanding of the standards themselves.

Confusion about Cut Scores and Scales

But things really got complicated when NYSED turned to the task of developing cut scores and scales for the new tests. Prior to the introduction of the new tests, test scores had more or less directly reflected the number of points a student had earned out of a possible 100 points and 65 had been the passing score. It's not surprising that the Regents decided to maintain that passing score – as a way of maintaining continuity with past practices – especially because, for a period of time, old and new Regents exams would both be administered. It is clear that the great majority of non-experts, especially those who had grown up in New York and had taken Regents exams, more or less automatically assumed that 65 was a score out of a total possible correct score of 100.

NYSED, however, had developed a scaled-score model for assessing student achievement – meaning that the raw score a student obtained (or the number of points earned out of whatever maximum points available on the test) would be converted into a scaled score by the application of a mathematical model. “Cut scores” would be set at the two Regents-designated grades of 65 and 85 and other scores would be arrived at by placing the lowest possible score of 0 at a raw score of 0 and the highest possible grade of 100 at the highest possible raw score.

Questions about Reliability and Validity

When it came to setting the benchmark for meeting the standard, NYSED chose to rely on field tests that are conducted primarily to determine *reliability* and to use them to determine *validity* as well. The field testing of possible exam items is conducted to eliminate items that don't appear to be answered equally well by students of similar abilities or by students who are identified as belonging to different racial or ethnic groups and to determine the relative difficulty of different items (by rank-ordering the questions on the basis of the percentage of students who got correct answers on the accepted items). This latter step is intended to make sure that all versions of the tests have more or less the same number of easy and hard items.

This approach is consistent with the most respected psychometric model of test design and scoring/scaling – item response theory. Apparently, the model is quite good for ensuring reliability. Reliability can be taken as a guarantee that students who have similar skills will get more or less the same scores and that different versions of the test are more or less equal to each other in difficulty. But even a good model requires a lot of things to be done right. Although it's not relevant to our immediate concern, NYSED has been faced with a number of severe challenges to the coherence of the Regents exam system when things haven't worked right and reliability has broken down.

But more important than reliability is validity. A test must measure what it's supposed to, and student success on the test must mean that students meet the various specified standards. The achievement of reliability may be hard, but the

achievement of validity is harder still. And, in this case, it appears that NYSED's efforts have failed far more significantly than in the case of reliability.

What NYSED does is to convene groups of teachers with expert knowledge in the respective subject areas and ask them to determine the level of performance on the collection of field-tested items that would represent achieving the standard. And here the situation gets very complicated. What are those teachers asked to do in order to determine that performance?

According to Alan Tucker (n.d.), who was a member of a special panel convened by the Regents to examine unexpectedly high rates of failure on the 2003 Math A Regents exam:

A group of mathematics teachers and professors go down the ranking, from easiest to hardest, looking to set a "bookmark" at a question judged to be of a difficulty that someone meeting the desired performance standard would get right, say 2/3rds of the time.

NYSED staff and external consultants then constructed the mathematical model to determine all of the scaled scores along the raw score axis.

In other words, a group of experienced subject-area teachers from across the state are charged with the responsibility of determining satisfactory achievement of the state's learning standards by students on the basis of an educated guess about expected student performance on one item in a list of items that have been ranked on the basis of student performance on field tests. To the best of my knowledge, that approach continues to be used for all Regents examinations.³⁰

It's worth special emphasis that there is no evidence that this scaling process ever reflected manipulation on the part of NYSED staff to produce passing scores that would be politically acceptable. They and their consultants were simply doing the math. However, the issues that Tucker raised about the scoring process have not been publicly reviewed or discussed.

Why should performance on field-test items have any effect on the determination of the level of student performance needed for meeting a preset standard? According to Tucker, the field tests were the only tools that NYSED had available to use for this purpose and they tried to do the best they could. And why should such an important matter be left to the all-but-certainly subjective judgment of group of teachers – no matter how knowledgeable or talented they might be? There is a long and admirable tradition of involving teachers in matters of Regents exam design and scoring. Such an approach probably worked quite well when the design and scoring of exams was a more straightforward matter – in other words, prior to the adoption of a scaled-score model in the context of standards-based framework.

However, few teachers have the opportunity to become well versed in the assumptions and challenges of this new context of exam design. When it comes to making judgments about student performance, it's likely that the assembled teacher experts do what teachers almost always do – they balance their expectations about what they would like students to know with their understandings of state standards (which more or less correspond to their own expectations) and their real-life knowledge of

³⁰ A number of other individuals have described the standard-setting process in quite different ways. See, for example, New York State United Teachers, *NYSUT Briefing Bulletin*, May 1999; Gerald DeMauro, coordinator of state assessment, *How the Scale Scores Are Calculated for New York State Regents Examinations*, New York State Education Department, Office of State Assessment, July 2002; and George Madaus, "Attrition of Students from New York Schools," invited testimony at the public hearing Regents Learning Standards and High School Graduation Requirements before the New York Senate Committee on Education, September 23, 2003. Tucker's view and explanation appear to be the definitive ones. Suffice it to say, however, if reasonably informed parties can have such divergent understandings, the situation is far too complicated.

³¹ Memo from David Abrams, "New Sampling Method for Pretesting and Field Testing of Regents Examinations," New York State Education Department, Office of Standards and Assessment, March 22, 2004.

what their students have actually been able to achieve. That process may have many virtues, but it does not appear to have much to do with determining what level of student achievement meets a predetermined standard.

In addition, the field testing itself has come under criticism. According to Tucker, when the Math A panel was investigating the circumstances around the June 2003 Regents, it discovered numerous shortcomings regarding the representative character of students participating in the field tests – primarily because high school participation in the field testing is voluntary. The panel recommended that the process be more carefully monitored in order to ensure appropriate participation from the various parts of the state. That recommendation was accepted by NYSED, but when it was implemented the following year, it still relied on voluntary participation by high schools.³¹

Thus far, a variety of supporters and critics of the Regents exams have managed to arrive at all but completely inconsistent understandings of the scaling process, and that suggests a very big problem. Good assessments should have transparency – the basis of different grades should be clear to all of those for whom it matters. But right now, there is no clear standard for high school student achievement on the Regents exams that could even be compared with a standard for college readiness. It is an urgent matter that the scoring and scaling processes be revisited and that a public discussion be held regarding appropriate standards for high school graduation and college readiness.



Annenberg
Institute for
School Reform

AT BROWN UNIVERSITY

Providence

Brown University
Box 1985
Providence, RI 02912
T 401.863.7990
F 401.863.1290

New York

233 Broadway, Suite 720
New York, NY 10279
T 212.328.9290
F 212.964.1057

www.annenberginstitute.org