From College Access to College Success

College Preparation and Persistence of BPS Graduates

A Preliminary Study
Boston Higher Education Partnership

2007

EXECUTIVE SUMMARY

Nearly twenty-five years ago, the Boston higher education community signed a Compact to promote college access for Boston Public School (BPS) graduates. The good news today, both locally and nationally, is that more students are graduating from high school and enrolling in college. However, the rates at which students persist and graduate from college have failed to improve at a commensurate rate. Though studies show that even some college education translates into financial benefits, the needs of an information economy increasingly require at a minimum, an undergraduate degree, and more often graduate or professional education beyond the degree. Without a doubt, today's currency for success is a college degree.

College access defined as college success is the focus of this report. Since its inception, college access has been central to the Boston Higher Education Partnership (BHEP) mission. Initiatives in the areas of research, policy, professional development, teacher preparation and partnership support seek to increase the number of BPS graduates who are prepared to pursue postsecondary education.

In 2006, the BHEP undertook a preliminary study of how high school preparation and the first-year college experience influence BPS graduates' ability to persist and complete a college degree. What makes this report different from other reports of college readiness and success is our look at both sides of the college transition process: K-12 preparation and postsecondary supports and students' perceptions of both. The result—a report that calls for shared responsibility and collaboration to better prepare and support Boston students in their quest for a college degree.

This study draws on a number of data sources. In surveys and focus groups with BPS graduates who had progressed through their first year of college, students reflected on how prepared they felt entering college and the support they received while there. A focus group of guidance counselors provided additional perspectives on students' pre-collegiate experiences. Finally, an analysis of first-year transcripts provided quantitative data about student preparedness and performance. Based on these findings, we offer recommendations for both K-12 and higher education leaders, researchers and practitioners seeking to support BPS students. Although this is a preliminary study of BPS graduates' ability to make a successful transition to college and persist through their freshman year, the data are both rich and revealing.

The adage that it takes a village to raise a child seems to apply here. Our findings suggest both secondary and postsecondary educators must share responsibility to ensure that students are well-prepared and supported to enter *and* graduate from college. Many of our findings suggest important areas for intervention and attention and also bear further study.

SUMMARY OF KEY FINDINGS

Pre-College Preparation

- There is a gap between curricular standards required to graduate from high school and what is expected from students upon college entry.

- One-third of BPS graduates in our study were enrolled in at least one developmental English course; one-half were enrolled in at least one developmental math course. Of the latter, nearly 40% of students failed or withdrew from the developmental courses.

- Students who completed Advanced Placement (AP) and honors courses in high school found these curricular choices to be particularly valuable in preparing for college. Advanced coursework provided a higher level of course rigor which better equipped students for college level work, and instilled confidence in their ability to face the demands in college.

- Students with weak academic habits and skills such as listening, note-taking and meta-thinking experienced difficulties adapting to college teaching styles and learning environments. In many cases their high school experience did not foster the development of these skills.

- Students reported few opportunities to develop non-academic habits and skills including: self-reliance and self-advocacy, communication and networking, and discipline, organization and time management. As a result, once in college they were not prepared for the demands of self-directed learning.

- Early messaging, planning and exposure to college environments and expectations were identified by students as important for a smoother transition to a college environment.

- Students expressed the need to plan earlier and prepare better for the SAT exam to provide them with more college choices and options.

College Experiences & Environments

Community Colleges

- Students attending community colleges were more likely to enroll in developmental coursework than those at four-year colleges. During their first year, students, on average, earned approximately 70% of all credits attempted. Excluding developmental courses, by the end of their first semester, students had completed the equivalent of less than two courses. At the end of their first year, they had completed roughly three courses toward a degree.

- Insufficient information about transfer, articulation agreements and changing program requirements left students confused about how to transfer to a baccalaureate degree program.

- Limited outreach by faculty and academic support staff, combined with students' reluctance to take the initiative to contact them, meant few opportunities for personal connections.

- Students felt discouraged by the lack of academic motivation of many of their peers.

Four-year Colleges & Universities

- First year seminars coupled with strong freshman advising programs were important sources of academic and personal support.

- Small class size facilitated student-faculty interaction and relationship building, both of which students perceived as critical to their academic success.

- Learning communities, in their various forms, facilitated supportive peer networks and students' connection to the college community.

Common Findings Across Institutional Types

- The demands of working many hours and meeting family obligations made it difficult for students to become engaged and integrated into their campus community.

- Living off campus created the challenge of "living a double life" with competing demands that limited students' ability to integrate into the social and academic life of the college.

- Students' financial concerns, including the stress of accruing increasing amounts of debt and the strain of meeting unanticipated expenses such as the costs of books and materials, were impediments to persistence.

RECOMMENDATIONS

Pre-College Preparation

College Preparatory Coursework

- Develop and expand opportunities for early exposure to college level work through AP and honors level courses and dual enrollment programs.

- Align the high school mathematics curriculum to teach the content and skills required for college level math and STEM disciplines.

- Facilitate stronger communication and feedback about expectations for college-level work between high school staff and college administrators, faculty and advisors.

- Create a K-16 agenda to align high school exit standards and curriculum. Advocate for policies that hold both K-12 and higher education accountable for student outcomes.

- Ensure that high school curricula prepare students for tests of college readiness, as well as to pass high school exit exams.

College Success Skills

- Provide instruction and practice to help high school students acquire the academic skills and habits that support their development as independent learners.

- Offer professional development for teachers and staff that demonstrates how to embed college success skills into the high school curriculum.

Messaging, Planning & Exposure to College Environments

- Establish structures and policies that set high expectations for high school students to assume responsibility for their own learning.

- Create programs to fill the gap between high school graduation and fall enrollment that specifically foster collegiate networks.

- Increase opportunities for students to receive early college exposure and support with the college planning process and include SAT preparation as part of that process.

College Experience & Environment

Academic Experiences & Environments

- Assess the effectiveness of existing advising structures for different student populations, especially those in place for commuting and working students.

- Improve communication about degree requirements and transfer procedures through written and web-based materials and group and one-on-one advising programs. Make this information available through multiple venues and on multiple occasions.

- Re-examine the specific needs of students enrolled in developmental courses to minimize the impact of these non-credit courses on degree completion.

Student Engagement & Integration

- Increase opportunities for learning communities, both in and out of the classroom. Provide incentives for faculty to connect and interact with students outside the classroom, especially during students' first year.

- Create comprehensive support programs that build peer networks and create connections to a smaller community within the larger college environment.

- Identify more opportunities for on-campus employment to foster students' integration into the school community.

- Provide on-campus housing, on-campus employment, and funding for college related expenses (i.e. textbooks, computers, materials) as part of a student's aid package, especially in the first year. Include information on financial literacy as part of a required First-Year Seminar.

Future Research

- Expand the study of BPS graduates beyond the first year to identify additional areas for intervention and improvement

- Increase the number of colleges and universities and students sampled.

- Examine students' high school transcripts to relate course-taking patterns in high school to preparedness and college success.

TABLE OF CONTENTS

INTRODUCTION

Since its inception, the Boston Higher Education Partnership (BHEP) has focused on increasing college access and success for Boston Public School (BPS) graduates. In partnerships with individual schools and the district, member colleges and universities offer a wide range of activities including tutoring, mentoring, and college awareness to support BPS students prepare and plan for a postsecondary education. With members spanning the K-16 continuum, the BHEP is well aware that the goal of sending more kids to college is important, but not sufficient. Well-paying jobs in today's economy increasingly require, at minimum, an undergraduate degree. Thus, the emphasis on college access needs to include college success or in the words of one of our members, from "bringing them in the door, to making sure they walk across the stage to receive their degree."

Nationally, there is increasing interest in gathering data on student persistence in higher education in order to understand the factors that place students at risk for dropping out and the programs and practices that work to support and retain them. These studies offer important insights and information about the challenges that students face and how these can be addressed at both the individual and systemic levels. However, there is still a need to take these to the local level; in our case, to understand the preparation and persistence of BPS students in college. Therefore, in 2006 the BHEP undertook a preliminary study of how BPS students' experiences in high school and college prepared and supported their transition to postsecondary education.

Our research draws on data from a number of sources which included focus groups with forty-nine, first-year college students who were graduates of nineteen different BPS high schools; 9 students attended one of Boston's exam schools, forty students attended a non-exam high school. In addition, a focus group was conducted with 7 BPS guidance staff. We also examined first-year course records for four hundred sixty-five BPS graduates from years 2003, 2004, or 2005 at eleven institutions of higher education, including 3 two-year and 8 four-year institutions of higher education.

We are grateful to the students who were willing to share their stories—though many were struggling, they were persisting and in many ways, defying the odds. We appreciate the honesty and interest of BPS guidance staff who have few resources, large caseloads and deeply care about the kids they serve. This study could not have been completed without the support and interest of participating colleges who were eager to learn more about BPS students' experiences to inform their efforts to better support their transition to college and quest for a degree. Our college representatives tracked down students, arranged focus groups and made important connections with key individuals including staff from institutional research offices who were willing to extract data from their records to respond to our requests. Finally, many thanks to our staff at the BHEP—Tracy Rokas who carried out the research and analysis, intern Renee Faulkner who prepared individual reports for each participating campus, and Kim Nguyen for pulling all the pieces of this report together. We are grateful to TERI (The Education Resources Institute) for their ongoing support of our work and to Ann Coles and Ruth Sherman who read drafts of the report and offered important feedback and suggestions.

This study is a first look at these issues with the intention of expanding both the pool of students studied and their persistence over time. What makes this report different from other studies of college readiness and success is our willingness to examine both K-12 preparation and postsecondary supports. Too often the focus is on one or the other and the result is finger pointing and blame. Our approach and findings call for shared responsibility and increased collaboration from both secondary and postsecondary educators to better prepare and to provide more effective support for Boston students seeking a college degree. Although many of our findings bear further study, they suggest important areas for attention, intervention and action.

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PRE-COLLEGE PREPARATION

Educational researchers, policymakers, and practitioners know that students' pre-collegiate experience influences their transition to and success in postsecondary education. The Boston Public Schools (BPS), local colleges and universities, and community agencies have focused resources on activities and initiatives to ensure that Boston graduates have the skills and knowledge to enroll and succeed in college. Their efforts include structures and programs to promote early college awareness, raise academic aspirations, set clear college expectations, provide comprehensive college planning and information sharing, support high academic achievement in core subjects, and inculcate key academic skills.

While we know WHAT conditions contribute to a successful transition to postsecondary education, there is still debate about how well current efforts are working. How are students experiencing their high school experience as it relates to college preparation? How does their academic preparation translate into college readiness?

This study provides a preliminary look at these questions and identifies areas for further research and improved practice. The study draws on data from focus groups with BPS graduates, as well as quantitative data on students' academic preparation and performance using first-year college transcripts of recent BPS graduates attending eleven Boston area institutions. To present this data in the context of students' high school experience, a focus group of BPS guidance staff was conducted to solicit their perceptions of BPS students' experiences following graduation and matriculation to college. Together, the data provide a first look at the pre-collegiate experiences of BPS graduates that, because of their potential to prepare students for college success, warrant closer attention.

This first section of our report examines the impact of BPS graduates' pre-college preparation and experiences on their ability to manage the transition from high school to college and when appropriate, presents this data in relation to relevant national data. It specifically focuses on the salient factors that students identified as important to their ability to succeed in college. The qualitative data presented are based on student perceptions. In some cases, they do not accurately reflect school and/or district policies and practices. Nevertheless, the data are informative as these perceptions become students'

operating assumptions which ultimately influence their understanding of their pre-college preparation and experience. Findings have been organized into 3 overarching categories that describe BPS graduates' social and academic transition to college.

1) College preparatory coursework and curriculum alignment describes students' perceptions of preparation received in core subject areas and their subsequent experiences in attempting college level coursework in these academic areas. It also presents student perceptions of the benefits of AP and honors level coursework in exposing them to college-level expectations and college knowledge while still in high school. Also included are guidance counselors' perspectives on the systemic factors influencing curriculum alignment and college counseling, including the challenges of information sharing and coordination of testing efforts between and within the secondary and postsecondary education systems.

2) College success skills presents the skills students found necessary to make a successful transition to college and the resulting effects of the development of those skills on students' ability to adapt to college environments and expectations.

3) Messaging, planning and exposure to college environments includes the role of high school climate and pre-college programs and outlines the important elements of college planning that students deemed critical to getting (and staying) on-track for college attendance and success.

Together these findings suggest that the preparation of BPS graduates helped to shape and define the challenges and successes they experienced upon postsecondary matriculation.

College Preparatory Coursework & Curriculum Alignment

Educational preparation has been shown to be a powerful predictor of postsecondary success (Adelman, 1999 and 2006, Gandara, 2002, Kirst & Venezia, 2004). Research consistently demonstrates that college enrollment rates are higher among students who participate in a college preparatory curricular program during high school (Tierney, Corwin & Coylar, 2005). Research also indicates that students who take challenging coursework, such as 4 years of college-preparatory English and 3 years each of college-preparatory mathematics, science, and social studies, are less likely to need remedial courses than students who do not take a rigorous curriculum (Abraham & Creech, 2002). Clifford Adelman's (1999) finding that a rigorous college-preparatory curriculum is critical to postsecondary success has become a touchstone in discussions of high school reform. Unfortunately, what constitutes a college preparatory curriculum and what students actually need to know in order to succeed in college are less universally understood.

This study, like many national studies, found that the lack of understanding of college expectations within secondary education was primarily attributed to the shortage of information available from colleges regarding the knowledge, skills, and competencies that high school students need to acquire for postsecondary success (Rosenbaum, 2001). This, combined with the presence of different assessments used within the secondary and postsecondary education systems, creates an environment where students are strongly encouraged to pursue postsecondary education, but are not necessarily prepared, nor informed of the challenges they will confront once enrolled (Kirst & Venezia, 2004).

Student Perceptions of College Preparation

When asked about the preparation that was most helpful to their ability to make the transition to college, students routinely mentioned core preparation in English and writing. They particularly emphasized the importance of being able to research and write papers. The following student quotes illustrate the point that students who entered college with strong preparation in writing often experienced a more successful transition from high school to college.

> *In terms of being prepared for writing classes and all that, I felt really prepared. I came here and it wasn't much of a challenge to write and get good grades.*

> *I went to [high school name]…and I got a lot of experience there. We had exhibitions and wrote papers and they prepared us for college. It's like a college prep school. College is really like the same for me because they made us do a lot of preparation.*

> *I think they prepared us really well for writing in college. At [high school name], we spent basically our whole senior year doing research and writing this big paper at the end. I had to re-do this paper like 5 times. It was this 7 page paper and the teacher doesn't grade it—the teacher sends it to the other teachers and they grade it—and it's like this whole thing where you have to pass it. They'd keep giving it back to you until you got it right.*

Conversely, students expressed less confidence in their preparation in mathematics. Students felt that their high school experiences in math contributed to difficulty completing college-level work.

> *[In high school] I didn't really take math courses I needed. I took statistics. I didn't take Algebra, so I'm really behind in my math—I'm trying to catch up.*

Students' concerns about their academic preparation in math caused them to avoid fulfilling quantitative requirement(s) in their freshman year of college due to the difficulties they expected to face.

> *My school, it prepared me for college writing—I had pretty good college writing teachers. But with math, I don't think they prepared me too well for that—I think they were kind of lax on that. I only went up to pre-calculus and I know I'm going to have so much trouble—I'm going to need tutors and lots of help—when I take math here.*

Students' difficulties with math caused some of them to consider changing majors—specifically those in the STEM (Science, Technology, Engineering and Math) subjects.

> *My biggest challenge was a career change. When I was in high school, my whole focus was to go and be a doctor. I came here and I realized, no, I don't like that and it was too hard—I was struggling in my classes. So, I took a bunch of courses that I didn't enjoy, and then I changed my major because I took a political science course that I really liked what they were saying, and I just switched.*

An analysis of BPS students' course-taking data supports their perceptions of their readiness for college-level math and English courses (See Table 1). A review of course-taking data for developmental and entry-level courses in English and mathematics reveals that of our sample of BPS graduates who entered as first-time, full-time

Table 1: First Semester Enrollment and Success Rates of BPS Graduates in Math and English Courses				
	# of Students Enrolled	% of Total Math Course Enrollees	Average Grade	% Failure or Withdraw
Developmental Math	162	49.5%	1.85	39.0%
100-Level Math	165	50.5%	2.54	19.4%
	# of Students Enrolled	% of Total English Course Enrollees	Average Grade	% Failure or Withdraw
Developmental English	114	30.0%	2.43	13.0%
100-Level English	262	70.0%	2.65	20.3%

students in the fall of 2005 and took an English course in that same semester, 30% took developmental English courses and 70% took a 100-level English course. In terms of math courses, 50% of students taking a mathematics course in their first semester of college took developmental math, and the other 50% took a 100-level course.

Not only did fewer students require developmental English courses than developmental math courses but also, performance in developmental English was significantly better than performance in developmental math. Students in developmental English courses earned an average grade of 2.43 on a 4.0 scale, while students in developmental math courses earned an average grade of 1.85.

The low grades in developmental math can partially be explained by the fact that 26% of all students who took a developmental math course in their first semester failed. Additionally, although not factored into average GPA, 11% withdrew and 2.5% were still carrying an "incomplete" in a fall course by the end of the spring semester. In total, this equals nearly a 40% failure or withdrawal rate for students who took a developmental math course. Failure and withdrawal rates in developmental English courses were far lower than those for developmental math courses. In total, 9.5% of students who took an English course within their first semester of college failed, and an additional 3.6% withdrew, bringing the failure or withdrawal rate for developmental English courses to roughly 14% compared with the 40% rate in developmental math.

Despite the performance discrepancy in developmental English and mathematics courses, performance in 100-level math and 100-level English courses was relatively similar. BPS graduates enrolled in 100-level English courses earned an average grade of 2.65 with a failure or withdrawal rate of 20.3%, and BPS graduates enrolled in 100-level math courses earned an average grade of 2.54 with a failure or withdrawal rate of 19.4%.

The placement patterns into developmental math and English courses and students' success in these courses substantiate and validate students' perceptions of their levels of preparedness in these core subject areas.

Table 2: First Semester Enrollment of BPS Graduates in Developmental Math Courses Exam Schools vs Non-Exam Schools				
	# Enrolled in Any Math Course	# Enrolled in Developmental Math Course	% Enrolled in Developmental Math Course	Average Grade Developmental Math Course
Exam Schools	66	9	13.6%	2.66
Non-Exam Schools	261	153	58.6%	1.81

Not surprisingly, there were notable differences between students' perceptions of their academic preparation based on the high schools they had attended. These differences were noted by students who observed discrepancies between their own preparation and that of other BPS graduates, as well as by students who had experienced more than one high school environment.

> *I think the difference between me and [the other focus group participants] is that I went to a vocational school, so we had classes every 2 weeks. And it wasn't too hard coming here because I took an English honors course in high school, but I still had difficulties when I came here.*

> *I switched from [first high school] to [second high school]. At [first high school], that was more preparation for college. They helped you prepare for college. All the stuff I learned there, that helped me for college. But not at [second high school] … I never got a sense they were preparing me for college. I don't feel like high school prepared me at all. I just figured when I got here I had to start new in all my courses.*

While recognizing that different BPS high schools serve student populations with different profiles, in fact, we found sizable variance between BPS high schools regarding the percentages of students who participated in remedial math and/or English courses and the average grades achieved. However, due to the small numbers of students included in some categories, the percentages are not reliable when viewed by sending high school. Variance in enrollment and grades achieved in developmental courses can be more reliably viewed when explored through groupings of students from "exam" and "non-exam" high schools.

Students from exam schools were less likely to enroll in developmental courses in both math and English. Fifty eight percent of students from non-exam schools who took any mathematics course during their first semester enrolled in developmental math, while only 13.6% of students from exam schools enrolled in developmental math (See Table 2). Students who were from exam schools earned, on average, significantly better grades in these courses, with an average grade of 2.66 as compared to an average of 1.81 for students from non-exam schools.

Enrollment in developmental English was also higher for students from non-exam schools than for students at exam schools. Thirty-seven percent of students from non-exam schools were enrolled in developmental English, whereas only 9.2% of students from exam schools took a developmental English course. Comparisons show less difference, however, in students' average grades earned in developmental English courses. The average grade for students from exam schools was 2.77, and the average grade for students from non-exam schools was 2.41 (See Table 3).

Overall, student perceptions regarding their level of academic preparedness in English and mathematics, as well as their placement and performance in college-level courses in these subjects ranged significantly. Many students indicated that English and writing skills were important to their ability to succeed in college. Not surprisingly, these students also were less likely to choose courses or majors that required quantitative skills.

In conclusion, despite some students' ability to avoid taking quantitative courses, the rate at which BPS graduates were placing into developmental mathematics courses, the low grades they received, and their frequent inability to persist in these courses suggest an urgency to increase the math competency of BPS high school graduates. Aligning secondary/ postsecondary curricular expectations and outcomes will better equip students with the skills and abilities necessary for successful college transition and persistence.

Advanced Placement Courses and Exposure to College Standards and Knowledge

Students gained the requisite knowledge and skills necessary for college through participation in Advanced Placement (AP) and upper level courses in high school. Students who took these courses reported that they were particularly valuable in preparing them for college. Students found participation in AP courses not only provided a higher level of course rigor, but also gave them their confidence in their ability to face the challenge of college level courses.

I went to a college preparatory school, and all my writing, all my AP courses were actually college level. And when I came here, I mean, maybe it's because I'm just a freshman, maybe it's going to get harder, but right now in my freshman year, it seems like I'm well prepared. It seemed like more of a challenge in high school.

I had AP Language and Composition class, so I was well prepared for English.

I think my writing was [good] when I came to [name of four-year private college] … I think I was prepared for the work I faced in college. They were demanding in high school … My writing was so [good] when I came in here because I had taken AP courses.

AP Courses really helped me. That introduced me to higher level stuff, like just

Table 3: First Semester Enrollment of BPS Graduates in Developmental English Courses Exam Schools vs Non-Exam Schools

	# Enrolled in Any English Course	# Enrolled in Developmental English Course	% Enrolled in Developmental English Course	Average Grade Developmental English Course
Exam Schools	87	8	9.2%	2.77
Non-Exam Schools	289	106	36.7%	2.41

the things we learned about. I felt like those were college level as opposed to being at the high school level with everyone else.

Although relatively few students appeared to have earned college credit through participation in these classes, (seen through a review of credits earned prior to enrollment presented in Part B of this report) the benefits of AP courses, as well as other accelerated curricular offerings extends beyond opportunities for advanced learning. Research indicates that participation in advanced courses also increases exposure to college knowledge. Kirst & Venezia (2004) found that students in accelerated curriculum tracks in high school receive clearer signals about college preparation than their peers in other tracks. This is partially explained by the fact that teachers of these courses assume that students are college-bound and thus send both subtle and explicit messages to students about college standards and expectations, and the requirements for applying and getting accepted into selective colleges.

In addition to taking AP courses, students indicated that participation in upper level humanities courses offered at certain high schools provided dual benefits of preparing them for college-level writing, as well as for college-level content and reasoning.

My school was college preparatory…and they prepared us a lot for college from freshman year. We had a course called humanities—we didn't take English and History, we took humanities instead. And…a lot of the stuff we did in that course has helped me here with writing papers and all that, which, when I was in high school I hated the course because of that, and now I'm here, I'm grateful that I took the course. It was the writing but it was also just the stuff we covered. We did a lot of presentations and group work. Sophomore year we dealt with immigration and that was cool.

I went to [school name] and similarly, we had humanities and that prepared me a lot—talking about racial and cultural identities—we had themes every year like one of our themes was "What Governs Us" and we focused on the law and peoples' cultures and what does it mean to be human, we studied that, or how do you do the right thing in the face of injustice like looking at the Israeli-Palestinian conflict.

While the merits of a strong college preparatory curriculum were acknowledged by students and guidance counselors, both qualitative and quantitative data indicate that many of the BPS graduates in this study are not entering college with the academic preparation necessary to succeed. The number of students who were not able to successfully complete developmental courses in mathematics is of particular concern. Although this study did not include an evaluation of students' high school transcripts, an examination of course-taking patterns associated with success in college-level work would provide additional insight into the knowledge gaps that exist between students' high school mathematics preparation and even the most rudimentary college developmental math courses.

Counselor Perceptions of Curriculum Alignment

BPS guidance staff echoed students' observations about academic preparation in core areas and also expressed concerns that, overall, high school curricula do not adequately prepare students for college. The counselors isolated 2 key areas for improving students' academic preparation for

college—curriculum alignment and communication from postsecondary to secondary education systems about college-level expectations and standards. With regard to curriculum alignment, counselors described the need to raise existing high school curricular standards to prepare students for college rigor.

I don't see this as a guidance issue— I see it as a curriculum alignment issue. We need to align our high school requirements with the college basic required skills for these students to survive. And we're not.

The colleges are working in a vacuum, the high schools are working in a vacuum and we don't even know that they're not prepared.

Even 'A' students are going and taking the placement tests and are ending up in remedial courses. At least they are willing to stay, but the motivation is not there for students who were already struggling.

We can improve students' chances if we require four years of math—there are studies after studies for the past twenty-some odd years verifying and checking that the kids who have had the 4 years of math and the 4 years of writing…have a much better chance of persisting at the college level. We've got to go back to a strong curriculum that allows you, no matter where you go to college, to succeed.

Despite consensus on the importance of raising curriculum standards to align with college expectations, counselors questioned whether doing so would preclude some students from graduating due to increased high school exit standards. They emphasized that any attempt to raise standards would need to be phased in. The counselors also identified a gap in curricular standards and alignment between middle school and high school, and the resulting challenge of helping students reach college-ready standards if they enter high school already behind.

I think the other piece is that, when you are speaking of our population of students—where they're at academically when they come to us—you have to consider a lot what the potential is to get that student to succeed in college.…It's something that the whole system has to take responsibility for. But public schools, their primary responsibility, for years, has been to graduate students from high school and those that would go on to college would go on to college. That's what the whole MCAS (Massachusetts Comprehensive Assessment System) piece has been—to focus on graduating students with a tenth grade math and reading level.

Counselors expressed frustration over this conflict of expectations and lack of resources available to BPS high schools to fulfill their stated objectives. As a result, counselors questioned the strength of commitment to preparing all BPS graduates for college attendance.

I think a lot of schools that are not urban have comprehensive high school, technical vocational programs and all the other programs, and I think they know who they're sending to college and they just prepare those kids super duper well—they're taking ten AP courses and doing all sorts of stuff to make

sure that those kids go to the best college. You know, here in Boston, we're trying to send all *our kids to college, but there are not the resources or the programming that is going to help them go and compete in that world.*

One area of the high school curriculum identified by counselors as needing better alignment is science and technology. They noted that the knowledge gap of BPS students face in these content areas is often greater than other students because the curricula have not kept pace with ever-increasing standards in these fields. As a consequence, counselors believe their students are disadvantaged in comparison to their suburban counterparts by the growing disparity in technology training in urban (non-exam schools) versus suburban schools. This is further exacerbated by increased expectations for students enrolled in entry-level college courses to accommodate those who enter better prepared.

Aligning secondary/ postsecondary curricular expectations and outcomes will better equip students with the skills and abilities necessary for successful college transition and persistence.

I think, especially in specific majors, we need to do a better job of aligning. When I speak to students who have graduated from [high school name], especially when it comes to software development or computer science, those types of courses, they just don't have the background that the suburban students have so they can't keep up in a programming class or lab because they just never had the exposure to the classes here. And the ones I've spoken with have been top students at [high school name] who have really solid math and science backgrounds, but they just don't have that technology edge. When a student goes into that class with no background in Java programming for instance, and they go into this class where everybody has some exposure to Java programming except for them and they're spending eight hours doing homework and everybody else is saying it's really easy, it really is discouraging.

But the colleges have to upgrade their curriculum because the industry is telling them that we need skilled workers with BA degrees coming out with this basic knowledge. So, a student going into engineering has to know algorithms, has to know calculus. So they have to keep up with industry demands, but the high schools are not upping their curriculum to keep up with them.

Counselors recognized the pressure on colleges and universities to respond to rising levels of student preparedness and to rising industry standards in technology fields. However, they noted that this puts additional pressure on BPS graduates who are already significantly disadvantaged as they attempt entry-level work in these fields.

Communication of College-Ready Standards

The counselors' comments presented throughout this study reflect their general understanding of the academic expectations for college level work. However, counselors reported that the communication gap regarding curricular expectations between postsecondary institutions and BPS high schools impacted their ability to support students in

the science and technology fields, as well as all in core curricular subjects.

National studies have also highlighted the disconnect in the transference of information about standards from postsecondary to secondary school systems. Venezia, Kirst and Antonio (2003) report that one of the ten most common student misperceptions about preparing for and attending college is that "meeting high school graduation requirements will prepare me for college" (p. 2). Research on the communication of expectations and standards between secondary and postsecondary education suggests that it is especially helpful for disadvantaged students, while honors students can succeed with less K-16 cooperation (Kirst & Venezia, 2004).

Shared assessments and opportunities for informal conversations across educational sectors offer the potential for communicating this information about standards and expectations. For example, the use of multiple tests (MCAS, PSAT and SAT, Accuplacer) with varying standards can create confusion for students and teachers as they attempt to understand what it means to be college-ready. Misunderstandings about standards and expectations and the existence of multiple and varied assessments particularly disadvantages students who are not on an accelerated academic track. Kirst and Venezia (2004) observe that, "High school graduation standards and minimum competency tests are not sufficient preparation for postsecondary success, though many students think they are. Once students enroll [in college], they face challenging placement exams, faculty expectations, and general education and graduation requirements that they often do not know about. [And] they end up taking remedial courses that better signals may have prevented" (p. 20).

Communication issues that surfaced in this study mirror these national findings. Guidance counselors were troubled by the fact that many of their students operate under the false assumption that their ability to pass the MCAS with minimal proficiency is a measure of college-readiness. One example of the inconsistent messages or signals that students receive about college standards and expectations is the disconnect between the MCAS exam and the Accuplacer test in determining college readiness. Students' scores on the Accuplacer, as seen in the numbers of students requiring remedial courses, indicate a need to better understand what it means to be college ready or college prepared. Counselors noted that more information and exposure to the test while still in high school would help students better prepare for the test, while also identifying areas that need strengthening prior to high school graduation. This would also yield important information to teachers about what students are expected to know prior to college matriculation. As one focus group participant stated:

> *They go to [name of community college] and they can't pass that test—now they're taking courses that are not college courses and, at the end of the year, when they go to transfer somewhere, they don't even have college courses on their record…And that* Accuplacer *test, they hit it cold. There's no preparation in most of the high schools for that test and it was only this year that I found out about it and this is my first year after 28 years of finding out about it. I don't want to let them go take it now without preparing for it. SATs—everybody knows about SATs, but nobody knows about this.*

The counselors were not alone in their desire to understand how to better prepare students for these tests. District-wide there is also motivation to better inform and prepare students for the *Accuplacer*.

Three BPS schools are currently piloting a program which could eventually provide all eleventh grade students with the opportunity to preview and prepare for the Accuplacer test before entering college. Eventually, these efforts could lead to modifications in the curriculum based on students' test performance.

Counselors also noted gaps in communication between secondary and postsecondary educators about student outcomes for BPS graduates once enrolled in college. Guidance counselors expressed frustration with the difficulty they experienced in obtaining information about how their students were managing the transition to college, and cited FERPA (Federal Educational Rights and Privacy Act) laws as the greatest obstacle to information-sharing.

> *The colleges can't tell us anything because of FERPA laws. …where you build up a relationship with the admissions counselors, they might quietly, if you say, 'How are my kids doing?' they might, if they are lucky, have access to that information, but they don't necessarily because admissions is separate from the registrar and once they get that class off and running, they're doing recruiting for the next class. And the ones who are at the smaller schools, they have databases that track previous matriculants from a particular high school…but when it comes to getting information for retention purposes, they can't tell us anything because these students aren't our kids anymore—they're adults with privacy rights and they'd be violating the law in giving us that information.*

> *I called for a student today. I called the college and they couldn't even tell me if she was admitted or not.*

Counselors commented on the need for stronger partnerships with admissions staff as well as developing better feedback mechanisms about student performance and persistence. They felt this information could potentially help their students make more informed college choices. Furthermore, counselors added that better communication would aid colleges and universities in their efforts to support their students once enrolled.

> *I had one instance where I think the student, in all honesty, wouldn't have made it through freshman year. The person called from the college and asked, 'What is going on with this person because she is having a really hard time?' That was the only time that [name of college] called me to ask about a student and we were able to have a dialogue. And that student, who probably wouldn't have made it through freshman year, made it through freshman year.*

> *The essence of what's missing is that there is no connection between the high school people and the college people. There is no information exchange between high schools and colleges. Once the students graduate—once they go—then that's it…So, the colleges are working in a vacuum, the high schools are working in a vacuum, and we don't even know that they're not prepared. We sort of have an idea, but we don't even know exactly why they're not prepared to stay on in college.*

The lack of cooperation and communication between secondary and postsecondary systems is the subject of concern not only locally, but nationally. Patricia

Gandara (2002) observes that programs at the K-12 level and programs at the college level aimed at helping underrepresented students succeed in college typically exist in isolation. In the end students suffer as a result of little or no communication about standards and expectations or the support mechanisms that promote success.

In summary, BPS counselors recognized the formidable challenge of preparing students for college success, when there was poor curricular alignment and a lack of communication about standards and performance between secondary and postsecondary education systems. Additionally, the counselors noted the importance of mathematics preparation, writing intensive and AP courses, and early exposure and coordination of testing practices as vital to ensure college success. As several national studies have concluded, rigorous math preparation is inextricably linked to college success. The highest level of high school math completed is a significant predictor of a student's enrollment in developmental/non-credit courses (Olwell, 2006) and completion of a bachelor's degree (Adelman, 1999). Therefore, improved alignment and increased communication between those who develop and teach high school mathematics curricula and those who teach developmental and college-level math courses is crucially important to improving college outcomes for BPS graduates.

College Success Skills

The previous section focused on college preparatory coursework and curriculum alignment as key determinants of a successful transition and persistence in college. BPS graduates were quick to point out that the development of necessary habits and skills were equally important to their college success. When asked about helpful preparation for the challenges they faced in their first year of college, students most often listed skills they had been taught, or wished they had been taught, that routinely fell into two categories—academic and non-academic. Students placed greater importance on these academic and non-academic skills than they did on course content, and described them as the critical knowledge and behaviors necessary to meet the challenges of adapting to college teaching styles, climates, and the demands of self-directed learning.

National studies also indicate the importance of non-academic skills in students' ability to succeed in college. Educational researchers have found that non-academic skills (sometimes referred to as non-cognitive skills) are influential in determining students' educational and professional outcomes (Sedlacek, 1987; Sedlacek & Gaston, 1992; Bowles & Gintis, 2002). Additional empirical evidence points to the influence of non-cognitive factors on college persistence (Sedlacek, 1987; Tracey & Sedlacek, 1987; Sedlacek & Gaston, 1992; Gore, 2006). These studies provide statistical evidence, through the use of instruments such as the Student Readiness Inventory (SRI) or Non-cognitive Questionnaire (NCQ), of the correlation between different categories of non-cognitive skills and students' college persistence.

The following section presents the academic skills that students identified as being important to their ability to adapt to college learning contexts, including their reflections on situations that drew upon their ability to exercise these skills. This section of the report also addresses the non-academic skills students associated with their ability to acclimate to college environments and expectations, including their thoughts on the high school settings and experiences that helped develop these skills.

Development of Academic Habits and Skills

During discussions about college readiness, students' noted the need to adapt to different teaching and learning styles. Students felt they lacked the skills needed to help them overcome learning barriers in certain types of classes. Most notably, students identified listening, note-taking and meta-thinking skills as areas in which they needed more preparation and exposure to college standards. For example, some students described having difficulty with college courses that were based in discussion and lecture, but did not follow structured course readings.

> *[College courses] were just a whole lot different than high school. We had a book—not once do I remember using the book to do anything. We would just talk about everything. The funny thing is, I was in class every day, but I never passed one of my tests. I could study all day, but when it came to the tests…I was just like, lost.*

Other students discussed their difficulty in detecting the importance of key pieces of information in a lecture-based classroom setting.

> *When I first started taking classes, I had difficulty staying focused and absorbing information—just listening to the professor and knowing what was important to know.*

Students also associated note-taking with successful learning in a lecture-based format. Looking back, many wished they had more instruction and practice in using this important skill while still in high school.

> *I wish I had better note-taking skills. I wish I had more practice just pulling out information—not just taking notes from the board.*

> *One thing my teacher taught me in high school that was very helpful was—there was this one teacher who really gave me good advice, he told me to always take good notes and use abbreviations when you're taking the notes down and if a professor says, 'this might be on the test,' it's going to be on the test..*

Another aspect of learning at the college level which students found particularly challenging involved the expectation that they be able to talk discuss their learning—to explain on a meta-level the challenges they faced in grasping a concept.

> *Here at [name of community college], it's different because you have to be able to communicate what you are trying to say to the teacher all the time. You say, 'I'm havin' trouble,' but you don't know what you're having trouble with. Because you're sitting there and you don't really know why you're having trouble. You're really having trouble with the concept—period. But it's hard to tell a teacher sometimes what you're not getting when you're not getting it.*

> *And by the time you reach college, they're not even asking you along the way if you're following. Whatever it is, it's just I don't get it, I don't know how to tell you I don't get it, I just don't get it. Can you just help me practice it?*

Students frequently mentioned difficulties in discussing the processes of learning in relation to the subject of mathematics.

College made it harder because you have to explain now how you got something—it's just not a part of my language. I haven't learned how to communicate in mathematics. It's just a feeling you have. Things happen and you just know how to do things, but you can't always explain how you did it. Maybe someone's a visual learner and the teacher writes the problem on the board and, I'm like this, I'll get home and I'll remember, oh, that's how he did it, and I'll be able to do it. But the next day the teacher will be asking you how you got the answer, and I don't know. I'll just be doing what he taught me to do by example. I don't know how I got it. How did you get it?

The difficulty students described in articulating their learning processes can be understood through the lens of conceptual thinking. Conley (2005) conducted research on what knowledge and skills college professors view as necessary for student success, especially in mathematics. Data from interviews with college professors refer to the conceptual, not just procedural, thinking that is expected of college students.

"Successful students approach mathematical problems as they would an investigation. They ask questions, reflect and revisit their solutions with this idea in mind: It is important how one reaches a solution and why a solution works. Problem solving involves analytical processes and sets of skills [including]…thinking conceptually, not just procedurally, about mathematics. Successful students understand the relationships that exist between mathematical concepts, and that formulas do not function in a vacuum. They perceive mathematics as a way of understanding, a thinking process and not a collection of detached procedures to be learned and applied separately" (p.189).

I don't know who has to step up, but somebody has to step up. We treat them like high school students in high school and three months later they're treated like adults, like they should know how to maneuver the system.

These findings point to the importance of early exposure (while still in high school) to the teaching styles and formats students are likely to experience in college in addition to the need for curricular alignment and high standards. This would help reduce the contrasts in learning environments between high school and college that BPS students experienced.

Development of Non-Academic Skills

The previous section introduced some of the *academic* skills and habits of mind that students perceived as necessary for success in college. However, this study revealed that many of the skills and habits students attributed to a successful transition to postsecondary education actually fell within the realm of *non-academic skills* involving personal development and self-discipline.

The most often cited non-academic habits and skills thought to promote success in college included: a) self-reliance and self-advocacy, b) communication and connection, and c) discipline, organization and time management. These non-academic skills represent areas BPS students and guidance counselors associated with college success.

Self-reliance and Self-advocacy

BPS graduates and counselors both mentioned self-reliance and self-advocacy skills as important to students' ability to successfully navigate the transition to college. While there was widespread recognition of the need for these skills, counselors admitted that a significant amount of student hand-holding occurs in high school which can impede the development of these habits. Students similarly commented on the difference between high school and college environments and the behavioral expectations they were subject to in these two settings.

[My friends and I] talk about how to be in college you have to be responsible and know what you want. In high school people yell at you, 'Stay in school,' but nobody is doing that in college.

In college, it's not like high school where the teacher is always like, 'You need to pass in your paper. You need to pass in your paper.' In college, you either do it or you don't, but it's up to you.

From the counselors' perspective, the behavioral expectations in high school are considerably lower than those of college faculty, thus making it harder for students to transition from secondary to postsecondary education.

… students get a lot of support in high school. They may not think so, but we remind them of everything. In high school it's a constant struggle just to get the students to do the work and to take the steps necessary to get in to college. And the colleges and universities, they expect that students walk in and they're going to be responsible.

I don't know who has to step up, but somebody has to step up. We treat them like high school students in high school and three months later they're treated like adults, like they should know how to maneuver the system. And there's nothing in between to bridge that gap between adolescence and adulthood.

Counselors also observed that many BPS graduates are first-generation college students, a factor that can present an additional challenge because they often enter college without the knowledge of what self-advocacy skills are expected.

> I wish they would have taught me better study habits in high school. Like I said, I had to come here and learn that the hard way.

That is different for our students than for some of the suburban students. Our students' parents did not go through this process and they're not able to maneuver through the system as easily as college-graduated and college-educated parents would be able to do for their kids.

While students described many of the challenges they faced as a result of their lack of self-reliance, some noted specific teachers or school staff who helped them develop habits of introspection and independence, or provided them with opportunities to assume responsibility for their own learning.

Staff members at school helped to prepare me for, like, college responsibility and independence. They taught me that you've got to handle your business—ain't nobody else going to help you. If you get in trouble, there's a reason for it. The annoying staff

members that you didn't like—they kind of prepared you. After you reflect, you realize if I had been doing this, this wouldn't have happened. It's like in my first semester here I slacked off a lot and I realized it was something I was doing. It was all preparation. It was something I wasn't doing that was causing me to get bad grades.

The classes I went to, they always prepared me for college. There are always going to be students who mess around, but if you just do your work and take it seriously, you become independent, and that helps you when you get to college, 'cause nobody's going to be checking up on you in college.

One of my teachers forced us, well, not forced us, but, you know, it was up to you to do your work and it felt like you were in college and you just had to be responsible and maintain the time and do your work. If you needed help, he'd be there, he'd explain everything in discussions, kind of like the way it is in college—you know how you discuss everything before you write a paper. And, if you had questions, you'd ask.

As these quotes indicate, students recognized that in some cases teachers and school staff held them to high standards while in high school. However, the combination of holding students to high expectations combined with inculcating self-advocacy and self-reliance skills is what students believed was most critical.

Communication and Connection

Students also found that their ability to communicate and connect with others in their new college settings was especially challenging. This skill was particularly vital as their peer groups changed after high school graduation. BPS graduates described the difficulties they experienced with the transition to college, leaving behind close circles of friends and relationships with teachers and administrators who knew them well over a period of time. They described college as an environment in which they were much more independent and often, more isolated from both friends and educators.

In high school, when you change classes between periods, chances are 7 to 10 people from the class before were in that one too. In college, it's a totally different experience. At least for me, it was kind of tough to make friends 'cause I'm kind of shy. It was hard for me to meet people and make friends.

Some expressed appreciation for high school teachers or staff who helped them understand the importance of these skills.

At my school, they didn't do it all the time, but it's important for them to remind you why you are there. The lectures they gave me really helped me prepare for communicating with other people.

Despite the overwhelming consensus that professors and college staff were willing to speak with them and provide help, most students indicated that they were reluctant to initiate such contact. They described their strategies for dealing with problems as ones involving isolation and introspection.

More or less [the professors] are ready to help you if you need it, but I always just kind of deal with things by myself.

I'm having problems because of what I want to do. I'm trying to find out what is best for me, but I figure maybe if I keep on thinking it through I'll figure it out. I don't ask for much help. I just kind of figure things out myself.

Although most students did not have effective strategies for reaching out and accessing campus supports, the following two quotes demonstrate the knowledge and skills of communication and networking that a few students *did* possess that enabled them to transition more easily from high school to college.

My advice to high school students would be to concentrate on developing relationships with your professors, and with your advisors. You want to keep the people you were close to in high school, and you want to cherish those people. But you're going to meet new people and you have to start forging other relationships. You're taking a big transition to college, and your professors have like hundreds of students they have to deal with, but you have to figure out how to get to know them somehow—somewhat. You're going to need recommendations and people to refer you on to other opportunities, co-ops, internships, etc. I haven't really developed my relationships to these levels, but I want to get to that level. For professors, one strategy that worked pretty well was taking more than one class with a professor.

You have to have better relationships with people who can advise you because in high school you really don't think about having to do that kind of outreach to your professors or teachers. Things are a lot smaller and you get to know people more easily. But it's really important in college.

Too often students associated asking for help as a sign of weakness or failure, rather than as an important step in resolving issues before they became problems. Sometimes, students who had the chance to interact with and obtain advice from upperclassmen were able to learn that getting help early on was much easier than trying to catch up if they fell behind. Unfortunately, most hadn't anticipated that this was an important skill to have in order to succeed in college.

Discipline, Organization and Time Management

BPS graduates indicated that if they had developed stronger skills in the areas of discipline, organization and time management, they would have been better prepared to succeed in college. As mentioned previously, students widely acknowledged the differing standards for personal responsibility that existed in high school and college. Similarly, students agreed that stricter standards and greater expectations in high school would have helped them transition more seamlessly from secondary to postsecondary education.

I think the thing that would have helped in high school would have been if they had had realistic homework expectations, and then just made you get it done. Being stricter would have helped you prepare for college when you have no choice but to get the work done.

I wish they would have taught me better study habits in high school. Like I said, I had to come here and learn that the hard way. In high school, I would have a test one day and I would study the night before. I don't like

to admit it, but I wish they had forced me to really study.

In my high school, if you came in when you were in seventh grade, your teachers kind of grew attached to you and they would give you lots of breaks and it was not good because you would wait to do things and they would let you hand things in late.

A recent ACT study found that academic discipline was the college success skill most greatly associated with degree completion (Gore, 2006). This same study also found that the strength of this correlation exceeded that of any measurement of cognitive ability.

Although some students wished they had developed better academic discipline in high school, other students indicated that they had been given extensive opportunities to learn how to be organized and meet deadlines. Additionally, there were students who remarked that they possessed an inner drive which rendered external discipline virtually unnecessary.

I think I was pretty lucky because back in high school they were always teaching us to do essays and how to be organized, and had us make binders and all that stuff. I think my high school was actually harder than this school.

I think it depends on the person because … I went to the same school and I didn't feel like I really needed structure like that because I had my own drive, I guess. I just kind of put it in to my own head 'oh, I've got to get this done' so I didn't need people to tell me—even, my mom, she didn't really need to do that because I took it upon myself to be into my academics, so when I came here, I was the same way. I didn't really have the academic problems cause we had 7 classes, so I have [fewer] classes now, so it's like I feel relieved in a sense because I have [fewer] classes and I transitioned from high school to college with no problem in the sense that I had my own structure and I did my work regardless of whether somebody was bothering me about it.

Guidance counselors also raised the concern that the leniency of BPS' current attendance policy could negatively impact students' development of discipline and time management skills. Counselors observed that students who were regularly tardy or absent were less likely to succeed in the more difficult courses necessary for admission to and success in college.

I mean, our kids are used to missing—what's the rule? You can miss forty days and go to summer school. Where can any of us go to work and miss forty days a year and keep our job? Where can you learn algebra and chemistry and algebra II and all those things that are fairly challenging and be absent forty days?

BPS graduates and counselors alike recognized that success in college is also linked to the development of non-academic skills including: self-reliance and self-advocacy, communication, discipline, organization and time management. They agreed that students should have the chance to acquire these habits within the high school setting, as well as through experiences and exposure outside of school. Focused efforts aimed at developing these skills would benefit students' growth as independent and responsible learners and develop the attributes they are expected to possess upon entering college.

Messaging, Planning & Exposure to College Environments

The final set of conditions that students and counselors described as an important part of their pre-college preparation fall within the category of early messaging, planning and exposure to college environments. These findings correspond with research that suggests that high school practices and environmental factors serve as good indicators for how students will fare in college. Specifically, Tierney, Corwin & Colyar (2005) list 4 key components of high schools which have a tremendous impact on college access and success: 1) a college preparation curriculum; 2) a culture that establishes high academic standards and includes formal and informal communication networks that promote and support college expectations; 3) a school staff that is collectively committed to students' college goals; and 4) resources devoted to counseling and advising college-bound students (Tierney, Corwin & Colyar, 2005).

Students' collective experiences emphasize the importance of the high school climate and culture and the benefits of early messaging, planning, and exposure to college environments and expectations. This was particularly evident as participating students described different experiences depending on the high school they attended. These findings indicate that early and sustained intervention is critical. Students frequently indicated that participation in programs with such features not only gave them the motivation to attend college, but more importantly prepared them for the academic challenges and climates they would face. In addition to the importance of messaging and preparation within high schools, students often noted the critical role various outreach programs played in providing them with actual exposure to college campuses, students, and standards—all factors they associated with their ability to successfully transition to postsecondary education.

<u>High School Climate</u>

Schools convey messages about college expectations through their school climate. Similar to academic preparation, the duration and intensity of messaging varied considerably among students from different high schools. When asked about pre-college exposure to college knowledge, BPS graduates described receiving very different messages about college attendance depending on the high school they attended. In addition to exposure to college expectations through AP coursework, the benefits of mission-driven preparation and messaging found at high schools that students described as "college-prep" appeared sizable. This was particularly evident in the case of students who made distinctions between their schools and others through the use of the labels "college-prep" or "not college-prep."

> *Our school was a college preparatory school and from the seventh grade on they were like, 'College is like this, and college is like this', and when I got here I think I was pretty prepared.*

> *I went to a college-prep high school and it was like, college—that was the only option after high school. And like, even from freshman year… yeah, since high school they'd been telling me to go to college and that's why I came here—for a better life.*

While most students described some level of college messaging during high school, those who were at high schools they described as "college-prep" commented that they experienced earlier and more consistent messaging about college planning and expectations. At the schools students labeled as not

"college-prep," they described more conflicting and belated messaging that was less effective in helping them prepare for college.

> *I think high school prepared me my senior year—not when I was a freshman, sophomore, junior. When you're a senior, they are all trying to give you a lot of resources, and getting you to think about where you want to go to college.*

> *[My high school] was different from [her high school]—they weren't college preparatory—they didn't get on to that until twelfth grade. They don't want to push the students too hard, but they have to give us more chance to see what college is like—otherwise, when you get here, it's going to be too hard and you're going to drop out.*

> *My high school has mixed messages because of how things are structured over there. As I was saying, we have the pathways that were pushing us that we have to go to college, but at the same time, they were preparing us for the workforce. We have all these different pathways that were more career-based.*

The messages and expectations that students receive regarding their postsecondary options are important to their development of college-going aspirations. Studies have shown that even the intention to go to college increases the likelihood of college attendance by 21% when that intention develops prior to tenth grade, as compared to plans formulated during a student's senior year (Alexander & Cook, 1979). And, more recent research also indicates that early college expectations stimulate planning for college and provide motivation for students to maintain grades and engage in necessary extracurricular activities (McDonough, 1997).

College Planning and Preparation

As indicated above, the development of college planning and preparation is strongly influenced by the high school climate. Patricia McDonough (1997) explains, "College plans do not simply happen. They must be fostered and encouraged through a school's culture. A student's plans for college are affected by the normative expectations that exist among the students, parents, and personnel of a high school, as well as by anticipated consequences and what alternatives will be considered or ignored" (p. 31).

I think it would have been great to have more exposure to [college] students when we were in high school.

Overall, there were marked differences between students' experiences with college planning and messaging in high school that appeared to be linked to their schools' academic climates. Students who attended high schools where these messages came early and strong described a smoother transition to college as a result of their exposure to both higher academic standards and knowledge about what to expect.

BPS graduates described high school classrooms as the primary setting in which effective college planning occurred. Teachers with high expectations encouraged postsecondary planning and nurtured students' academic confidence.

I felt like they prepared me since I was a freshman because when we wrote papers we all had to write them like we were writing them for college.

One of my teachers like forced us, well, not forced us, but, you know, it was up to you to do your work and it felt like you were in college and you just had to be responsible and maintain the time and do your work. If you needed help, he'd be there, he'd explain everything in discussions, kind of like the way it is in college—you know how you discuss everything before you write a paper.

Specific assignments aimed at familiarizing students with the college search process and college practices, such as creating a class schedule, simultaneously fostered college aspirations and assisted with the planning process.

My sociology teacher, [high school teacher's name], for homework we had to list six colleges and why we wanted to go to them and do research on these colleges. And she had people who came in like, 'Oh, I'm so glad you pushed me to go to college'. Other students would come to our class and tell us about college.

I had a history teacher who made us make this schedule where we had to pencil in the courses we wanted to take on certain days. It was good because she was just very college oriented. She was like you got to make sure you study, make sure you're not fooling around, go to college, do what you gotta do and then possibly go on to your master's and your Ph.D.

Another early planning and preparation issue noted by some students was their desire for more preparation for the SAT. This issue became relevant to students as they experienced the determining role that low SAT scores played in limiting their college choices.

I think my writing was [good] when I came to [name of college]. I'm doing well, but I think it would have been better if, when I was a freshman, they would have encouraged me to take an SAT course or something. They were demanding in high school, but it would have really helped to get help with the SAT. My writing was so [good] when I came in here because I had taken AP courses, but my SAT scores were so low that I didn't have many choices.

And I don't know, but I think if they could have prepared me better for the SAT I could have gotten into, I mean, this is a good college, but I could have maybe gotten into an even better school with higher SAT scores.

I struggled on the SAT and I did struggle a little on the MCAS, but I didn't really struggle with grades…I wasn't prepared. I struggled a lot with my SAT. I got around an 800, so I just felt like, why not go here 'cause they don't take the SAT, and maybe I can transfer.

In summary, students' perceptions of messaging regarding postsecondary education were heavily influenced by the high school climate, resources, and staff expectations. The ways in which schools convey college ready standards extends beyond the traditional college planning process and includes classroom assignments and preparation for the SAT. As a result of their perceptions of these forms of

messaging, some students perceived that their high schools were "college-prep," while others did not.

Exposure to College Environments & Expectations

Among our sample of students, opportunities for early experience in college environments and exposure to college expectations were critical to preparation for postsecondary education. Only 12% of focus group participants had participated in dual enrollment during high school. However, 47% had participated in pre-college programs aimed at either increasing exposure to college environments and expectations or providing academic support in their preparation for college.

Cabrera and La Nasa (2000) conclude that the process of becoming academically qualified to enroll in college begins as early as the 8th grade. Therefore, they suggest that college preparation programs should begin to work with students during middle school and junior high school to ensure that students and their parents are informed about academic requirements for college. However, Gandara (2002) warns that when college preparation programs do not provide opportunities for students to simultaneously increase their college-going aspirations *and* academic readiness, they are limited.

> "Well-implemented, comprehensive programs that extend over a considerable length of time do appear to be able to at least double the rates of students going into some kind of college. They do not, however, appear to raise grades or test scores, and thus their major impact is getting students who would not otherwise go to any college to go to a community college, or those who would aspire only to a two-year college to go on to a four-year college" (p. 95).

All students in this study who participated in programs which included spending time on college campuses found them to be invaluable especially when they experienced what it is like to be a college student.

> *It was good to see a college campus. It helped me get an idea of what it would be like to be on a college campus.*

Students viewed programs that allowed for actual time spent on campus and where participation spanned multiple years were most effective. The few programs that supplemented and supported high school learning were particularly beneficial.

> *I participated in Upward Bound [at name of university] like every summer after I started high school. …you had to get to classes on your own and…you had to go from your dorm 15 to 20 minutes to where you got [were going and get] something to eat and it really gave you an experience of what college would be like. And we actually got to take classes that helped you with your next year in high school. That was helpful.*

> *We weren't a college-prep school, but there were a lot of people there—we had programs there like College Bound, which wasn't available to all the schools, and a lot of things like that just pushed us to show us positive messages and show us the way and hopefully give us that nudge just to try to think of something better for after high school.*

Some students participated in multi-year summer programs at the institution they were attending; they described these programs as invaluable in eliminating many obstacles other students faced in transitioning from secondary to postsecondary education.

> *I mean, I don't really remember transitioning [to college] because I mean, it was so long ago—it was at the end of my junior year. I did System 5, and I did [it] three years in a row…and, when I started here last year it was like, hey, it's nothing new. [In the System 5 program] you were also taking courses with professors and it really meant there was nothing too new when we came in... [Those of us who participated in System 5] had so much experience here that we could just hit the ground running.*

Students who were part of one program in particular, College Bound, indicated that the most valuable aspect was opportunities to interact with professors. This interaction allowed students to recognize important differences between teaching styles found in high school and college and participate in college-level classroom discussions. Their exposure to college expectations also helped them learn to assume responsibility for their own learning.

> *I had a chance to take part in College Bound, which was something that somehow gave me a whole new perspective of what college would be like. So, being part of it and taking classes on campus—when I came here I had a sense that things were under control. I went to [the college] once every month and took classes that helped to prepare you for different aspects of college. And all the classes were taught by professors and that helped. It's like when you're in high school, it's more like the teacher is always controlling the class, but at the college level, it was an interaction between students and teachers and you can voice your opinion without reservation.*

> *I actually went through College Bound as well, and that was a big help because we were at [the college] at least twice a month, and having the professors teach us was different from having the teachers from high school and, if you didn't do the stuff you had to do, it was on you. They don't hound you. If you don't do it, it's your own fault.*

Many programs offered students opportunities to interact with college students who provided them with honest information about how to succeed in higher education and enabled them to imagine and think of themselves as future college students.

> *In terms of gaining exposure to the culture at college, the COACH program helped too because you could interact with college students and find similarities and you just started to feel like you fit in.*

> *People who came back and told you the truth about college helped a lot. They helped you realize it's not that bad. They gave you information you really needed so you could know what you've gotta do to get ready for college. In America, they make it easier for you to go to the army than to go to college because they ask you all this information and give you all these deadlines. For the army, you just got to show up and they take care of the rest.*

> *I think it would have been great to have more exposure to [college] students when we*

were in high school. It would have been great if someone had come and could tell us about what it's like here.

Regardless of the duration and intensity of the pre-college programs, students valued these opportunities to gain exposure to college environments and expectations. Students found that programs that provided in-depth and sustained involvement had lasting benefits on their college aspirations as well as supporting their successful academic and social transition to college.

Depending on the school they attended, students experienced differences in the college-going climate and culture. Students' high school experience, including exposure to college-level expectations and participation in pre-college programs were important to a successful transition to college. These findings suggest a need for district-wide policies and practices that address the knowledge, skills, and standards students need to access and complete a college degree.

COLLEGE EXPERIENCE & ENVIRONMENT

Colleges and universities employ numerous measures to promote persistence and degree attainment for their students. Some measures include targeted outreach programs, academic support centers, engaging campus activities, advising programs, and developmental courses. Many institutions of higher education make special efforts to support Boston Public School (BPS) students. In an effort to understand how BPS graduates transition to college, we examined how students experience and perceive these efforts. Our findings provide information about the strategies in place to support BPS students during their first year of college.

The findings presented in this section complement those presented in the previous section of this report, which identified the pre-college experiences and preparation that influenced BPS graduates' ability to transition and succeed in postsecondary education. Those experiences included academic preparation, the development of academic habits and skills, and early exposure to and awareness of the demands and expectations of college.

This section highlights some of the factors and supports that influence students' ability to succeed and persist once they arrive on college campuses. The findings are drawn from focus groups of first-year college students who graduated from the BPS and include an examination of a sample of first-year college transcripts of four hundred sixty-five BPS 2005/2006 graduates evenly distributed across two- and four-year institutions. Conversations with college administrators provided additional information on the types of courses, programs, and activities available to BPS graduates. A number of recurring patterns and themes emerged as important indicators of students' ability to progress toward a college degree. Our data revealed important differences in the experiences of students at community colleges and four-year institutions, differences that are noted in national studies and research literature which we have referenced as appropriate.

Our report of BPS graduates' experiences during their first-year of college is organized according to the categories described below: 1) factors associated

with students' academic experiences and environment, and 2) factors associated with students' engagement and integration into the campus community.

1) Academic experiences & environments describe factors such as developmental coursework, student advising, faculty accessibility, and the process of declaring a major that influence students' transition and acclimation to the social and academic expectations of postsecondary education. In addition to the qualitative data provided by student interviews, quantitative data drawn from students' transcripts yield important information on course-taking patterns and performance for our sample of BPS graduates who entered as first-time, full-time students in fall 2005 in one of the eleven participating institutions.

2) Student engagement & integration includes student experiences to engage and integrate into their college environments. Subsections address factors related to the campus environment, employment, on-or off-campus residence, learning communities, personal obligations and financial concerns. Again, the data suggest differences between students' experiences at community colleges and four-year institutions which is often a function of their different missions, student bodies, and resources. Nevertheless, the findings are worth noting as are the implications for strengthening institutional programs and practices.

Academic Experiences & Environments

Students' academic experience—and the support they receive—influences how well they manage the transition from high school to college. Our findings are based on student perceptions of their experience and, in some cases, may not reflect the presence or absence of college programs or practices. Nonetheless, the quotes represent recurring patterns and themes that surfaced in the focus groups and were often supported by the analysis of student transcripts.

Community Colleges

Nationally, community colleges enroll 45% of all first-year postsecondary students and the largest number of low-income and first-generation college students (Bailey, Alfonso, Calcagno, Jenkins, Kienzl, Leinbach, 2004). With a primary mission of providing access to diverse student populations through their open admission policy, community colleges typically serve larger numbers of academically unprepared students and transient students than four-year institutions. This mission to serve the broadest range of learners poses greater challenges to integrate and retain entering students. Research indicates that community college students face greater challenges in obtaining a degree in a timely fashion. Although in 2005, over 70% of students who enrolled in a community college expected to eventually obtain a bachelor's degree, only one-third of all students who initially enrolled in a community college received a degree or certificate within 8 years. Almost one-fifth of traditional-aged community college students complete ten credits or less (Bailey, Calcagno, Jenkins, Kienzl, & Leinbach, 2005).

Our study indicates that many of the BPS graduates who enrolled at a community college faced many of these same challenges. We examined the persistence of first-time, full-time BPS graduates at 3 Boston area community colleges (See Table 4). Outcomes from their first 2 semesters of college revealed a 67% persistence rate through the end of the second semester, and an average accumulation of 9.6 credits that counted towards a degree (roughly equivalent to 3 college courses). Students' first semester academic

performance was better than their second semester performance in both average GPA earned and the percentage of credits completed. In their first semester, students in our sample earned an average GPA of 2.56, and completed 70% of all credits attempted. In their second semester, students from the same sample earned an average GPA of 2.29 and completed 64% of all credits attempted.

Focus groups with BPS graduates and an analysis of their transcripts offered insight into the academic supports and challenges of the community college environment. Key factors that appeared to negatively impact students' transition to college were enrollment in a large number of developmental courses, ambiguity regarding degree requirements, and confusion about transfer policies and procedures. Additional factors that impacted students' ability to succeed and persist were the availability of quality advising, the accessibility and approachability of faculty, and participation in support programs.

Developmental Courses

Students who require remedial coursework upon entering college are less likely to earn a college degree. Research indicates that this is due in part to the increased time required to complete a degree since developmental course credits do not count towards graduation. In a study of college transcripts, Clifford Adelman (1999) found that the more remedial courses students took, the less likely they were to earn a degree. In his study, among students who earned ten or more college credits, only 45% of those who took 2 remedial courses earned either an associate's or bachelor's degree by the time they were thirty years old, as compared with 60% of those who took no remedial courses. A more recent study found that enrollment in developmental courses was 1 of the 2 strongest factors negatively correlated with student persistence (Hawley & Harris, 2005).

The first section of this report revealed the high rate placement of BPS graduates into developmental math and English courses at both community colleges and four-year institutions. Community colleges had larger numbers of first-time, full-time students enrolled in at least one developmental course than participating four-year institutions: 68% and 25% respectively. Additionally, 17% of community college students were enrolled in developmental ESL courses that do not carry credits towards graduation (See Table 5). The rates of participation in developmental courses for BPS graduates were higher than the national rates of 42% at community colleges and 20% at four-year colleges (NCES, 2004a).

Enrollment of BPS graduates in developmental courses was typically not limited to a single course; 54% enrolled in at least 2, and 22% enrolled in 3 or more developmental courses in their first semester of college (See Table 6).

Consistent with national trends, our findings indicate that remedial course enrollments played a significant role in delaying students' progress towards a degree. When including all courses—remedial and credit-bearing, the average number of credits *attempted* by BPS graduates at community colleges in their first semester was 12.6, while the average number of credits *earned* was only 8.8, or 70% of all credits attempted. When remedial and ESL courses are excluded and only credits toward a degree are

Table 4: Academic Performance of BPS Graduates at Community Colleges

	1st Semester	2nd Semester
Average GPA	2.56	2.29
% of Credits Completed	70%	64%

counted, the average number of credits attempted by BPS graduates in their first semester at a community college dropped from 12.6 to 7.0, and the average credits earned fell from 8.8 to 4.9 (See Table 7). Therefore, by the end of their first semester, the average student in our sample completed fewer than two college credit courses.

BPS graduates' performance over their first two semesters of community college showed a similar trend. Participating colleges' measure for "on-track" progress toward a degree is the completion of twenty-four college bearing credits during the first two semesters. Yet, BPS graduates in this study accumulated on average only 9.6 credits, and only 9% met this "on-track" marker by the end of their spring semester.

As early as the end of freshman year, the impact of enrolling in developmental courses on students' progress was apparent. Students who enrolled in at least one developmental course persisted at a rate of 66%, as compared to 69% of students who did not need developmental courses.

Ambiguity Regarding Course Requirements

Students expressed confusion about which courses they needed in order to complete their program requirements. Students at one community college indicated that they were provided a clearly outlined course plan of study that guided their course selection, while students at two of the other participating community colleges indicated they encountered significant problems in understanding the courses required for degree completion. This lack of clear information was further exacerbated for some students who experienced difficulties locating information and/or guidance that would help them stay on track.

> *There is this class I needed to take and nobody told me I had to get it done. It wasn't one I had to take when I started. And now, they don't offer it this semester, so I have to loop around and take it next year.*

> *I almost got caught up in a situation where I was taking courses I didn't need to take, but I looked through the course catalogue myself and that's when I realized that I didn't have to take the new courses that had been added since I declared my major.*

At one community college, students perceived that requirements for a degree were constantly changing and unclear. They were frustrated at having to take courses to fulfill requirements, only to find out later that the requirements had changed and additional courses were necessary.

> *Every year something changes, so the program, the path you set out upon, that's not going to be the path that next year you're going to be put upon. For instance, to take* Microbiology *you need* Chemistry 1 *and* Biology 1*, but to take [other science course name]—which is a more sophisticated course—you don't need to take* Biology 2 *and* Biology 1*. But last year they dropped that requirement, so people who didn't take* Bio 2 *and* Chem 1 *don't qualify to take other classes because* Chemistry *is a requirement for these other classes. It just makes you feel like you're just working to go backwards. If you just kept it the same and the classes didn't change, then you would know where you were going.*

Students expressed a desire for clearer pathways to degree attainment and course requirements that remained constant over time. Students were especially frustrated by the limited flexibility in course scheduling and expressed a desire for greater

availability of particular courses that were required for degree completion and a less restrictive curriculum. However, regardless of the validity of these students' perceptions, it was apparent that many students experienced academic setbacks due to confusion regarding course requirements.

Academic Guidance and Advising

Students reported difficulty securing needed guidance with course selection. Although a few students indicated they received regular advice from their advisors in more structured programs (such as nursing), or through an external program advisor (such as a career specialist), the majority of students indicated that they lacked easy access to college advising. As a result they worried that they were making critical decisions about their education without the benefit of an advisor's input or approval.

> *[Initial registration is] just kind of like, I'm going to go to college now and I have to take some classes, but they don't tell you anything. And you'll ask people, 'What do I do? What do I do?' And the people at the desk, they don't really tell you what you've got to do. They will look at you like you have two heads. Usually you have to dive right in and take classes because you can't find your advisor in time to organize your classes.*

> *I met my advisor for the first time last week (early April)—by accident. Every time I go to find him, he's not in his office. So I saw a teacher of mine who signs my card for my classes in the cafeteria and she was like, 'Who's your advisor? That's him right there.'*

On the other hand, students who were in a special support program and had regular contact with faculty and administrators described receiving more consistent guidance and support—often from multiple sources.

> *Because I am in [the Student Support Services program], I am definitely better off, but for people who are not in the program, when you sign up for classes, they really don't tell you anything.*

Some of these support programs were aimed specifically at BPS graduates; others were targeted more generally toward low-income and/or first-generation students. Regardless of the program type, BPS graduates who participated in these programs felt they provided invaluable supplemental academic support and direction, as well as important social connections within their academic environments.

Students felt that advisors were overburdened and overextended. Students were skeptical about developing a meaningful relationship with advisors who needed to serve large numbers of students. As a result, students were discouraged that they were unable to make these connections and receive the information they needed due to advisors' heavy caseloads.

> *Once a year I am supposed to meet with my advisor—just to sign up for my classes. At that moment they act like they care—they ask you—they make it seem like they really care, but they don't really care. They have 2000 students walking through there every day. They don't ask me…they don't tell me to come back and see how classes are going. They don't want to know how things are going. Maybe it's for students who actually come back. Maybe they want the students to come back themselves, but I haven't seen*

them make an effort towards me to try to steer me in the right direction or try to help me out with the best solution for transferring.

While face-time with advisors was a scarce resource, students found that their professors were approachable and even offered to meet with them outside of class. However, despite an open invitation to "come in and talk," students reported that they rarely took advantage of these opportunities to connect with faculty. Research suggests that intrusive advising practices, whereby institutions initiate and aggressively bring academic support services to students, (especially first generation students) are more effective than programs and practices that rely on students to access them on their own accord (Cuseo, 2003).

Effective retention programs place advising at the core of their efforts to educate and retain students (Tinto, 1993). Bailey and Alfonso (2005) also emphasize the importance of academic advising as an influence on students' goal commitment and their intent to leave. Our findings indicate that students with ongoing access to advising as part of a targeted student support program were more satisfied and more likely to be on track towards graduation than those who lacked access to such programs or staff.

Confusion About Transfer Policies and Procedures

Students described frustration based on their perception that the credits they were earning would not transfer to other academic institutions—particularly to four-year colleges. Similarly, students expressed concerns that their community college education would not be valued in the wider academic community.

I don't know. I don't want to be here too long. Because, coming from a community college, I just always feel people give you that look like you're not good enough to come to their college. And things don't transfer because the classes aren't considered good enough.

I want to get out of here as soon as possible. I see this place as a dead end. One of my friends came from [a four year private college] to here and all he had to do was finish a few credits and he didn't.

When asked about their educational goals, students' responses indicated a lack of awareness of existing community college pathways and articulation agreements. Many students had heard about the possibility of transfer to a four-year institution, and expressed a desire to do so, but they could seldom identify the necessary steps to make this happen.

I wanted to transfer after [my first] year, but they never told me what I had to do and what I had to get done. They said, 'Oh, if you do well enough, you can do that'—whatever that means. I have to go one more year now because I had a conflict with one of the teachers and dropped one of my classes and I don't think my credits are enough to try to transfer first-year.

Although each participating college had a designated transfer advisor, our sample of BPS graduates had not visited these advisors despite the fact that many expressed an interest in transferring. Students suggested that greater availability and earlier access to information on transfer opportunities would help them stay on track for transfer and other educational opportunities.

Four-Year Colleges and Universities

Overall, our sample of BPS graduates who enrolled at four-year institutions appeared to have an easier transition to college than their peers at community colleges. This finding is supported by national studies of academic performance and persistence in these different settings. Research indicates that students who enroll directly in four-year colleges are significantly more likely to complete a college degree than those who initially matriculate at a two-year college (Rendon & Garza, 1996, Gandara, 2002, Cabrera, Burkum, and La Nasa, 2003).

First-year student persistence—measured in this study at the end of the second semester—was considerably higher for BPS students who attended four-year colleges than for students attending community colleges. This was not surprising as students who entered four-year institutions were better academically prepared than their peers who entered community colleges. At baccalaureate institutions, 84% of the fall 2005 first-time, full-time BPS graduates persisted at the same institution until the end of their second semester. At community colleges this same cohort persisted at a rate of 67%. BPS graduates who enrolled at four-year colleges earned an average of 19.7 in their first two semesters—or a cumulative credit total of approximately 6.5 courses.

BPS graduates at four-year institutions also faced academic challenges. In their first semester of college, their average GPA was 2.54; this average dropped slightly in their second semester to 2.41 (See Table 8). In their first semester, students completed 76% of courses attempted, and in their second semester, completed 75% of courses attempted. Each of these measures is only slightly higher than the GPAs and course completion rates for community college students in our sample.

Students attributed their academic challenges to their individual circumstances rather than to structural, programmatic, or environmental influences at the college they attended. Most students described receiving positive support from college staff and finding faculty and administrators accessible and approachable.

BPS graduates at four-year institutions identified advising, availability of faculty, and the processes for declaring a major as factors that made a significant difference in their transition and persistence in college. Students identified specific insights into the ways some colleges and/or programs provided quality, multi-layered academic support, and the benefits of a major declaration process that allowed for flexibility and exploration.

Guidance and Advising

Nearly all of the four-year institutions in our sample offered an advising system that initially assigned freshmen to core advisors—often through a freshman year program or special support program. Once students were ready to declare a major, they were shifted to an advisor within that department. Students who were connected to a first year or other support program advisor were most likely to benefit from establishing a social and academic relationship with a person who cared about their success.

> *We met with our advisors and we met with our first-year seminar class leaders and they talked to us about the expectations and the classes, and to start thinking about your major and the things you want to do. And we met our student advisors as well. If our advisor isn't there, you turn to her.*

Table 5: Percentages of Students Enrolled in Developmental Courses BPS Graduates vs. National Enrollments

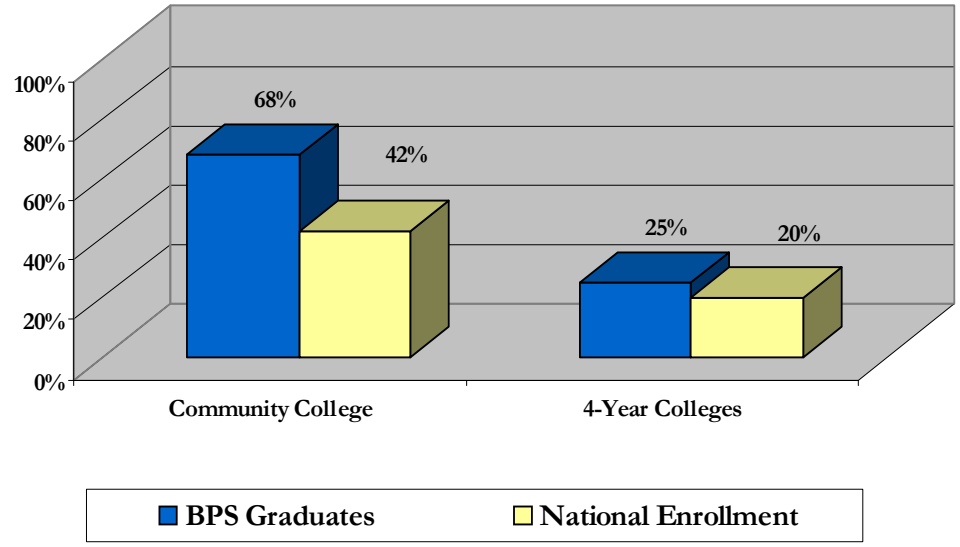


Table 6: Developmental Course Enrollment at Community Colleges Among BPS Graduates

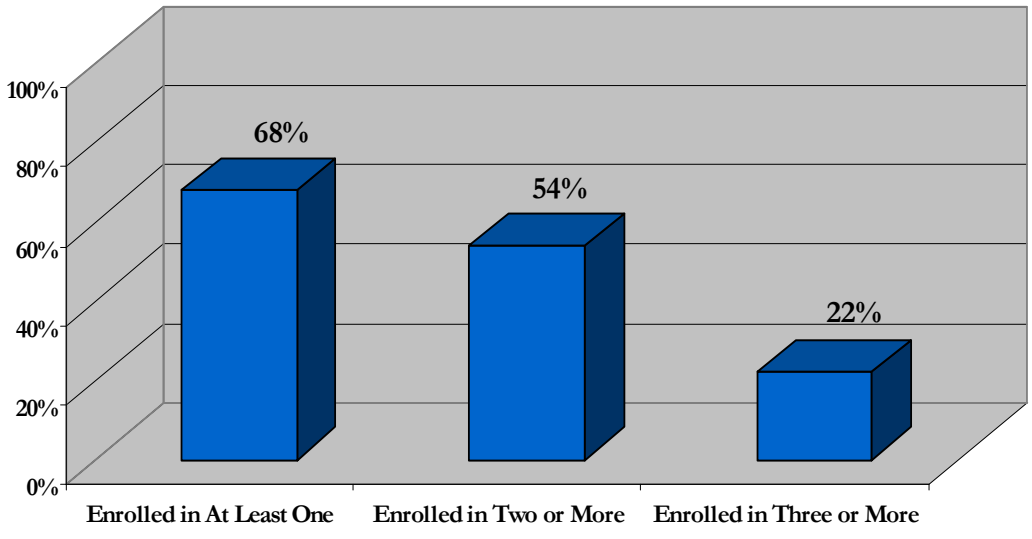
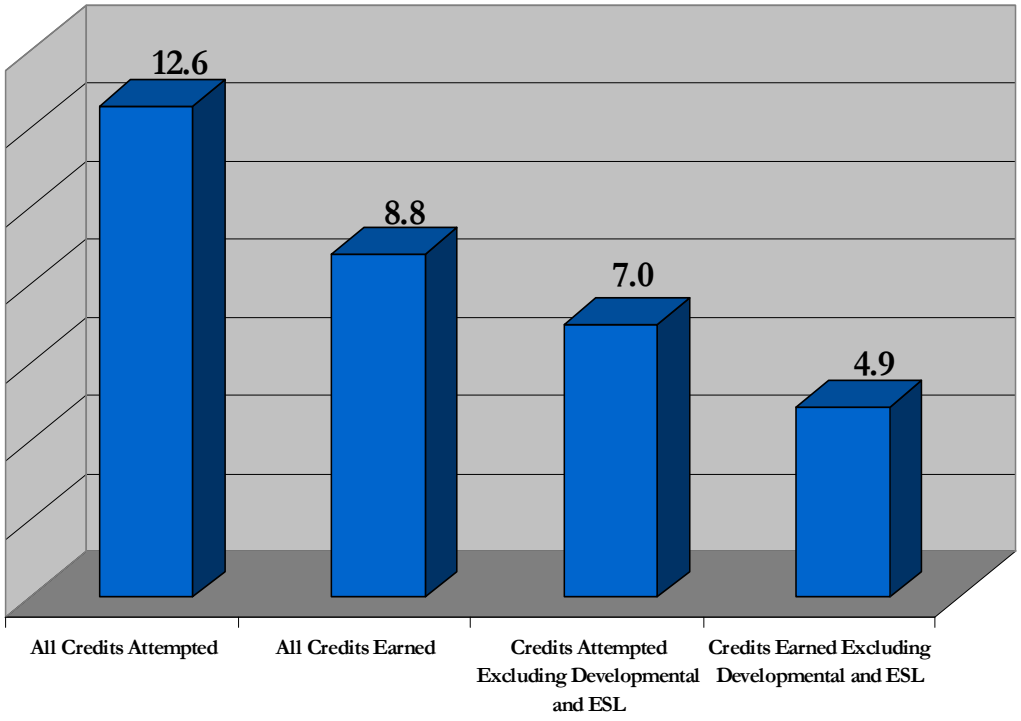


Table 7: Average Credits Attempted and Earned for BPS Graduates at Community Colleges - 1st Semester Freshman Year



Our first-year advisors are there for you. As soon as you send them an email, or you need to see them, they're there.

I actually just went to my [first-year] advisor. She just helped me pick my classes. She's always there when I need to discuss something or just ask her about something.

Students found that first-year advisors who participated in-class or out-of-class programming were individuals with whom they developed deeper, lasting relationships. Students expected that their freshman advisors would remain a source of academic *and personal* support even after their formal advising relationship ended.

For the [program name] we have one advisor regardless of our major. We all start with the same advisor as we will have for our whole time here. I always consult with her to make sure I am on top of everything.

[My program advisor] is like that. I come to her if I have questions about things or want some advice on my work. It doesn't have to be about school. She's cool like that.

Some of the teachers I had last semester and don't have them this semester, I really don't talk with them much, but my advisor and my professor from the FYI program, she's really great to talk to.

Advising systems that assigned students to a freshman or program advisor and later shifted them to a major advisor also had a positive effect of expanding students' networks of faculty and staff support and providing them with multiple sources of information and advice. Research indicates that providing a key person who monitors and guides the student over a long period—sometimes as a mentor, a program director, or a faculty member—is a highly beneficial practice (Gandara 2002).

Students who were in a special support program and had regular contact with faculty and administrators described receiving more consistent guidance and support—often from multiple sources.

Access to faculty was an important factor in students' ability to successfully transition at four-year institutions. Students at private four-year colleges described abundant opportunities to forge relationships with professors that were both academic and personal in nature. Nearly all interviewees described the positive impact that access to professors had on their sense of support. Students' ability to engage in ongoing personal interaction with faculty was strengthened by a level of comfort within their academic environment, their willingness to initiate such communication, and professors' relaxed demeanors and active outreach efforts.

And with a lot of the professors in this school—not all of them, but a lot of them—they're real down to earth and you can talk with them about anything. You can sit down with them if you need help on anything.

They talk to you if they see you're not in class. They'll stop you and be like, 'Why aren't you comin' to class, you're so talented?' There are so many great teachers here. I have a lot of good relationships with my professors. They really don't let you stay away. They are always asking you how you are doing with things and keep you coming to class.

Students also noted that small class size, most often found at smaller four-year private institutions, helped provide an environment where faculty knew students by name—a factor that seemed to facilitate student-faculty interaction inside and outside of the classroom.

I'm pretty easygoing with my professors. The professors know you here by name. The classes are so small. Most of them have office hours and they're really willing to help you. They encourage you to go visit them.

Student-faculty contact is what's keeping me from transferring, because, if I go to a big university, you're probably going to be in a lecture class with 100 kids and the teacher's not going to know your name.

Students described frequent opportunities to connect with faculty in both formal and informal settings. Many also expressed a level of comfort in initiating communication with instructors and advisors. Opportunities for students to receive encouragement and support, as a result of relationships forged with faculty, led to increased feelings of connectedness and a sense of community that enhanced their likelihood of persistence and academic success.

Choosing & Declaring a Major

Students' transition to college was positively impacted by having extended time to explore career options and possibilities before declaring a major. Although many students entered college with some idea of what they wanted to study, many lacked the practical knowledge necessary to make informed decisions and choices about majors or careers.

> *I came in knowing I wanted to be a lawyer and the reason why I chose [this college] was that they have one of the top programs in the area….I didn't know that you had to go to grad school to be a lawyer, so then I started thinking, what should I take, and I decided on accounting because my cousin is an accountant and he told me all about that and I really like math.*

Though deadlines for declaring a major differed among institutions, the opportunity to investigate and experience various fields of study before declaring a major was viewed positively by many students. Students indicated that delayed major declaration paired with an initial period of core course participation, quality advising, and the opportunity to explore different subject areas helped them stay on track towards degree completion.

> *I waited and declared my accounting major after my first semester. I wanted to check out the different programs when I came in because I wanted to do medical, but I've had experience with banking stuff….I decided I did want to do accounting, although, I haven't declared yet. I'm glad I looked into the medical thing, but accounting has a lot of good opportunities for me.*

Overall, students enrolled at four-year colleges experienced a positive transition to college. While their GPAs and course success rates indicate that they faced a high level of academic challenge in both their first and second semesters, students reported ample opportunities for support and guidance to overcome these challenges.

The following section focuses on student engagement and the institutional structures and practices that supported student learning and persistence. Students' ability to engage with the campus community—both in and out of class—emerged as a key theme in our study and its importance is well documented in the literature on student retention.

Student Engagement & Integration

Tinto's *student integration model* informs much of the research and practice on persistence and retention. This model suggests that student retention is related to how well an individual is integrated into the social and intellectual life of the institution (Tinto, 1975, 1993). Using Tinto's conceptual framework, this section examines the various programs, practices, and environmental factors that encourage or inhibit student engagement. Experiences such as the establishment of meaningful connections with faculty and staff, involvement in formal and informal co-curricular activities, and the development of a peer support network contribute to student connections to the campus community. Consequently, these experiences reinforce or modify students' initial commitment to degree attainment and to the institution which both directly influence a student's decision to persist.

Although numerous studies have challenged the applicability of Tinto's model of student integration in the community college setting (Bean and Metzner, 1985; Pascarella and Terenzini, 1991; Napoli and Wortman, 1998; Braxton, Hirschy and McClendon,

2004), these studies have focused on the needs and experiences of all community college students—a vast majority of which are part-time, non-traditional students. Our findings suggest there is little difference in the needs of full-time, traditional-aged BPS graduates, despite the different postsecondary environments into which they enter.

Because we found that student experiences differed by institutional type, our discussion of findings of student engagement and integration are separated accordingly. Specifically, our study revealed important differences in college environments that ultimately influenced students' engagement and integration into the campus community.

Community Colleges

As mentioned previously, some researchers argue that Tinto's model is not well suited to explain student persistence at commuter institutions since it was developed at residential colleges and universities (Braxton, Hirschy and McClendon 2004; Bean and Metzner, 1985; Pascarella and Terenzini, 1991). These arguments tend to overlook those first-time, full-time, students who enroll in college within 2 years of high school graduation who expect to start out at a community college and transfer to a four-year institution (70% of entering community college students nationwide fall within this category), or earn an associates' degree and embark on a professional career.

The sample of BPS graduates who enrolled and attended community colleges held similar expectations as their peers at four-year, residential colleges. These students were seeking opportunities to develop social relationships with academically-focused peers and a sense of belonging to an academic community. Our findings offer insight into the social and personal experiences of this student cohort as they experienced these opportunities at their postsecondary institutions.

Students faced a number of challenges to developing social relationships within their community college settings. Some differences related to students' ability to balance heavy work commitments which interfered with full-time enrollment. Another commonly cited challenge was the difficulty in establishing social connections in a transient student environment. This was often compounded by students' perceptions that many of their classmates were not academically-focused. Combined, these perceptions made students feel as if their college environment more closely resembled high school than their expectations of college.

Students often commented on the *absence* of community on campus which they largely attributed to the transient nature of the student body.

> *…This is a community college—I'm never probably going to be seeing these guys after a semester because I'm always making new friends every semester. There's probably like ten people I know who will be coming back. It's a come-and-go school.*

> *I couldn't tell you who's who and what's what. My field of vision is like this (narrows hands together around eyes). I couldn't tell you most of the people's names in my classes. I might recognize you in the hall and wave, but don't come to me next semester. I won't remember you.*

Student perceptions of a lack of permanence in the college community contributed to their unwillingness to invest in developing relationships with peers. Students indicated that initial attempts

to develop social ties within the college community were often met with disappointment and resulted in a decision to forgo engagement with their peers.

> *At the beginning I was socializing a lot. I was in [the student union] too much. Now I've decided to keep it small. This school is like high school. There are a lot of haters in here. They're always talking about somebody.*

> *I spend about ten class hours a week here. There was a time I would come and play pool here sometimes in my early days, but I stopped doing that…I was probably checking things out, but I just became more class oriented. I don't really think there's anything for me to find here socially.*

A notable exception was reported by students who participated in a comprehensive support program such as the federally funded Student Support Services (TRIO) program. According to these students, participation in such programs provided an invaluable connection to a smaller community within the larger college environment.

> *The [Student Support Services program] is down to earth. You want to feel like you are at home when you're in community college because community college is a you-get-your-stuff-and-go kind of school—you come, do your business, and leave—because you have so many other, outside things you're doing. [The support program] kind of brings that home feeling like four-year colleges do.*

Table 8: Academic Performance of BPS Graduates at Four-Year Institutions

	1st Semester	2nd Semester
Average GPA	2.54	2.41
% of Credits Completed	76%	75%

In the mid-1990's the Student Support Services (SSS) was evaluated and found to increase persistence to the second year of college at the same institution by 7% and persistence to the third year in *any* institution by 3%. The study also found that effects increased with increased exposure to SSS activities (Muraskin, 1997).

Students often cited engagement with their campus environment as an obstacle to overcome. Students perceived that the community college environment was too similar to high school—at least in terms of the non-academic factors. Students expected that college would offer novel educational and social experiences, but instead found that the situations and relationships they encountered strongly reminded them of high school.

> *I'm just here to transfer to [a four year university that has]…a lot to offer in terms of professors, academics, activities. There's a bigger student body. The campus—it's a college environment. This feels more like a high school environment.*

Students were negatively impacted by peers who lacked academic focus. Some students observed a lack of motivation and ambition among their

classmates, which contributed to their conscious decision not to engage within the campus environment. These perceptions limited their ability to learn, especially outside the classroom.

> *Here, there are a select few, and I always learn something from them 'cause they're bright kids, but most of them just come here for the hell of it, or to say they've been through college, to get their papers their associate's and that's it. No one has any ambition—that I've met so far.*

This issue was exacerbated by the unpredictable class attendance and persistence patterns of fellow students making group learning challenging. Students gave the example of group projects which put extra burdens on the few conscientious students.

> *My last team project last semester, we had a fifteen week project in my marketing class—they were all gone by the end of the semester. One of them stopped coming, then other one stopped showing up and the other one was just illiterate. I ended up doing [the] project just by myself.*

Another example cited was the formation of study groups or academic support networks. Students rarely made these important connections because of conflicting schedules and constraints of competing obligations outside of college. As a result, students perceived themselves as independent learners with no support from the larger learning community.

> *There are no real study groups. There's tutoring for people who need it in the learning center. My advisors gave me this thing in a binder that said that you should have at least one person's number in each class in case anything happens, but I haven't been very good at that. I'm just here to take care of my business and get on with it.*

Impact of Work

A central influence on students' ability to engage in their college environment was the presence of competing obligations outside of college attendance and coursework. Community college students identified the need to work as the most important factor in determining the amount of time they were able to spend on campus. Sixty-nine percent of the community college students who participated in a focus group worked an average of 33 hours per week; nearly all worked off-campus. The number of hours worked by BPS graduates is comparable to the national average for all college students of almost 30 hours per week (King, 2006). It is important to note, however, that this figure is an average of both full-time and part-time students. Thus, the number of hours worked by students in our sample is of particular concern, since our cohort was comprised of only full-time students.

Student-faculty contact is what's keeping me from transferring, because if I got to a big university, you're probably going to be in a lecture class with 100 kids and the teacher's not going to know your name.

Research has shown that students who work a large number of hours while attending college experience a number of academic scheduling problems. A recent study found that work limited students' class schedule by reducing the number and choices of classes they were able to take, and decreasing access to campus resources and facilities (King, 2006). The impact of work on persistence has been well

documented. Hawley and Harris (2005) examined factors that positively and negatively impact the persistence of first-year students at a large metropolitan community college and found that working thirty-five or more hours per week was 1 of 3 factors most strongly correlated with student attrition.

Working while enrolled in college does not always have a negative impact on student persistence. Research has shown that working fifteen or fewer hours per week—on campus or in a position related to one's academic interest—has a positive effect on persistence and degree completion. The bad news is, however, that only a minority of working students hold such positions (King, 2006).

The challenges of balancing the competing demands of work and school were not new to our sample of BPS graduates who had frequently worked a large number of hours while in high school—often at the same jobs they currently held. However, despite having previous experience juggling the responsibilities of work and school, most students indicated the amount of time spent working negatively impacted the quality of their academic participation and performance.

> *Work stresses you because you're so tired, and you know you can do better work, but you have to make compromises and get done what you can. Having a job affects my energy level. I'm definitely tired when I come to class.*

> *I work about forty hours a week outside of this, at my family's business…This semester has been difficult because a lot of changes have been happening with my business and a lot of days we were short handed and I had to be there and I lost some days and teachers don't appreciate you missing so many classes so I had a problem with one of my teachers.*

Overall, students found that work demands had a serious impact on their ability to fully engage with their college setting. They were challenged to reconcile their desire to become part of the college community where learning and academics were central, while at the same time, accommodate the competing demands of work and other personal obligations.

Learning Communities

National studies have linked participation in learning communities to higher rates of persistence. Tinto (1997) found that learning communities promote persistence by facilitating the creation of supportive peer groups among students, encouraging shared learning, and giving students opportunities to actively participate in knowledge creation.

Few community college students reported taking part in a specific learning community in the form of a program. However, the one student in our sample who had such an experience likened the course to a freshman year seminar aimed at providing strategies for succeeding and connecting with the college community.

> *I'm taking it right now. It's not a regular class, it's not math, English, science, but I think it's necessary to help you organize yourself. If you didn't learn those things in high school, it's good.*

Although this was a required course, it could be taken any time before graduation. Only 1 of the 6 students in the focus group at this college had taken the course during their freshman year. Students who

delayed taking the course missed an invaluable opportunity to connect with other first-time students to learn about various aspects of college survival.

> *It's a once a week class and you have to take it. They will not let you walk across the stage without the class. But if you graduate, then obviously you survived!*

Given the time constraints faced by these students, effective strategies for engaging with the academic community were more likely to be found in the classroom. Bailey and Alfonso (2005) suggest that designing the classroom experience to promote meaningful interaction among students and teachers is a promising strategy for community colleges. Keup (2005) sees engagement in the classroom as even more important given the many forces that draw today's students away from co-curricular involvement. The students in our study similarly found evidence of learning communities in their classrooms; in most cases students wished for more opportunities to engage in classroom learning communities and for making these visible and available to them earlier in their college experience.

Overall, student engagement at community colleges was influenced by a number of environmental factors including the transience of their student bodies, their perceptions that college was too similar to high school, and the lack of academic focus found in fellow students. Additionally, students' substantial off-campus work obligations, and limited opportunities to become part of smaller learning communities, detracted from their integration into the larger college community. These students would be well-served by efforts to create greater opportunities to work on-campus and to participate in classroom-based learning communities aimed at creating social and academic connections to their college environment—connections that are strongly associated with student persistence and degree attainment.

Four-Year Colleges and Universities

The influence of Tinto's student integration model on programs developed to support student persistence is evident on most four-year residential colleges and universities. Examining persistence at four-year institutions, researchers identified the frequency and quality of student interactions with peers and faculty and their participation in extracurricular activities as important measures of social and academic integration into college life (Pascarella and Terenzini, 1991). Campus administrators are well versed in the importance and effectiveness of providing opportunities for student engagement and integration, which was evident in the comments shared by our sample of students at four-year colleges.

Compared with their peers at community colleges, BPS graduates at four-year institutions had more opportunities to work on-campus, participate in classroom-based learning communities, and take part in extra-curricular activities, all of which are aimed at promoting student integration. These findings mirror national studies. However, our study found students were challenged by financial burdens, including factors related to living off-campus that were major obstacles to becoming fully integrated into college life. These students also struggled to balance full-time college attendance with work and life obligations. For students at four-year institutions, these challenges were partially offset by numerous opportunities to participate in small classroom-based learning communities.

Impact of Work

Roughly the same percentage of students at four-year colleges reported having a job—66% as compared with 69% of students at community colleges. However, the amount of time spent working was substantially less for four-year college students who worked an average of nineteen hours per week as compared to the thirty-three hours per week reported by community college students. Despite the fewer number of hours worked, students frequently cited the same academic impact as a result of combining full-time college attendance with part-time or full-time work.

> *Since entering college, I have learned a whole new perspective on time management. Last July I got my first real job, then I started college and I'm finding it very challenging to try to balance my time and still have time to do anything social. I'm working twenty plus hours and I'm taking five courses. I had to change my sleeping schedule and I'm doing alright. I'm not getting enough sleep, but my body has gotten used to it.*

> *I work about thirty-six hours a week. I work in the cafeteria, but it's not work study. I work every night then I go to sleep for a while, then I wake up and do my homework and study 'til about three in the morning…I'm always on track. I'm always tired when I wake up in the morning, but you can't skip classes just because you're tired.*

Research indicates that part-time, on-campus employment in a position related to one's academic interests, positively affects persistence and degree completion (King, 2006). Our sample of students at four-year institutions was more likely to have opportunities to work on-campus; 29% of all hours worked for pay were at on-campus jobs, as compared to community college students who reported 13% of all hours worked at on campus jobs. Students described the benefits of on-campus work in terms of flexible scheduling, social connection to college staff and students, and sometimes, the applicability of the work experience to future career plans. The only downside to working on campus identified by students was the lower rate of pay, which presented a substantial deterrent for some.

> *I meet a lot of friends who I work with around here. I work in one of the offices on campus and I've gotten to know a lot of people.*

> *Work-study is good because they understand that you're here first to study, and they allow you to be flexible with your schedule. But the rate of pay is so little, it's not so attractive.*

> *I work with [campus outreach program] for my work-study. It's great because I feel like I'm doing something really useful with my time and it's helped me get more experience in [the career field I want to enter].*

Aside from work-related demands, students frequently cited the impact of family and life issues on their academic careers. Although these issues were similar to those expressed by community college students, students at four-year colleges indicated greater stress and anxiety about the conflict they experienced in having to choose between the pursuit of their educational goals and providing childcare and/or financial support for their families.

I actually have been spending a lot of time on campus, but when I'm here, I'm on my own trying to get my work done—like, I spend a lot of time on the computers. For example, I'll be here tonight until around 11:00 because I can't be home because of my brothers—when I'm at home, I'm basically the mother and I have to make sure they're doing their homework, they're eating and they're not fighting and I have to take myself away from that so I come here to the library to work on my stuff. You'll see my face around and be like, 'doesn't she commute?' but I'm just here late all the time.

I feel a kind of pressure to do for my mom in the immediate future. It's hard to care more about the [distant] future. Sometimes it means my college work doesn't always get done. But she wants what's best for me in the future too, so I've got to keep the college goal going. She's like, 'Go to school, you're not doing it for me, you're doing it for yourself'… But when you talk to someone who grew up with only a mother, it's different. You know she's given you the best of her, and you want to give her the best of you.

I'm a mother and it's hard to find peaceful time to get things done, but I get it done…I worked through college, and I just got an internship, so I'm quitting my job. But I was working about twenty-four. I made it work though because I would arrange my classes so that I could work on 3 days and go to class on 3 days.

Challenges of Commuting

At community colleges, students appeared to take for granted that they, like everyone else, were commuting to campus. Students at four-year colleges, however, found that the financial need to live at home and commute to campus was more than just an inconvenience or practical challenge. They felt living off-campus placed them in a peripheral social position and at a considerable disadvantage to other students in trying to socially establish themselves at their institutions.

While the majority of students at the sample of four-year institutions in our study lived on campus, less than one quarter of the BPS graduates at these same colleges did so. As a result, our student cohort noticed sizable differences between their experiences as commuters and those of traditional college-aged students at their institutions. They frequently commented on the difficulties they experienced trying to integrate into a social environment dominated by the concerns and circumstances of residential students.

> *I think the college accepts you more if you live here, but if you commute, I don't think they integrate you at all.*
>
> *It's very different. In high school they cluster students in homeroom, and you have a group of people you see regularly. At college, being a commuter, it's especially hard to meet people. There is a commuter lounge where we sometimes congregate, but I don't have a great deal of interaction with people who aren't [of my own ethnicity].*
>
> *The thing that makes it difficult for me is [that] I commute and I think that I don't feel like joining anything like any clubs like that. This college is kind of laid back and there's not a lot of activity it feels like, but maybe it's*

because I don't live here because I do see people who live here saying, 'Oh, we're going to go out together'.

Another consequence of living off-campus was the experience students described of "living a double life"—one at school, and one at home. Students viewed these two lives as largely incompatible, each placing significant and often competing demands on them, which had a negative impact on their ability to integrate into the social and academic life of their college life.

There's like two separate worlds. There's school and there's outside of school. My friends at home, they aren't going to school, so when I'm not here, my life is a lot different.

My life is like split up because I have my social life here in school which is Monday through Friday, and then, Friday night to Sunday, it's with my family. It's kind of weird. It's like two different worlds—school here and my family here. During the weekends when you're home you're like, oh my God I've got to do my homework, but my family's going to have a cookout, and I want to do that.

My social life is pretty split up—I'd say it's about 50/50. And the two sides could never interact with each other. If I brought the guys from the other fifty percent—not to like make you guys scared of them or anything—but it would be very awkward for them to be walking around [this school]. They'd be like, 'What the hell are you doing here?'

As commuters, I think we still have a lot of pressures that take us away from college. We have a heavy life outside of college. Maybe I could live on campus, but it wouldn't be compatible with the responsibilities I have away from campus—to take care of my mother.

Although some colleges designated commuter lounges or a commuter advisor to help students who lived off-campus become socially engaged in the college environment, most students reported that these efforts were only minimally effective. Students described significant differences in campus involvement between commuter and residential students. The following quote from a residential student in our sample illustrates this point:

I live on campus. It's really nice just to wake up and go to class in the mornings. You also get to know a lot of people that way. I'm going to be an RA next year. I started participating in clubs from the time I got here. I even had the chance to form my own step club with a friend, but I gave it up because it was too much work to organize.

Learning Communities

Academic learning communities are a widely accepted strategy for integrating students into the campus community, especially those who do not fit the traditional, four-year resident profile. Colleges have made considerable efforts to improve the first-year experience by involving faculty and focusing on classroom teaching and learning to increase engagement among students (Keup, 2005).

Our sample of BPS graduates at four-year institutions experienced myriad opportunities to participate in small classroom-based learning communities. These were typically offered through a freshman year seminar or a comprehensive support/advising

program. In addition, students identified specific classroom practices which helped develop their peer support networks, as well as student-faculty interaction that encouraged engagement and integration into their campus settings. This matches empirical evidence linking participation in a learning community to academic and social gains, including the development of cognitive abilities, higher levels of interaction and integration, and the creation of a peer group network (Tinto, 1997, 2000; Keup, 2005).

Freshman Year Seminars (FYS) were a common offering at most four-year college in our study. The mandatory or voluntary nature of such courses, however, varied as did the length of the course—between one or two semesters. The most effective freshman year seminars provided students with more than an introduction to college learning. They also served as a social anchor during their transition to a college environment.

> *We met with our advisors and we met with our First Year Seminar class leaders and they talked to us about the expectations and the classes, and to start thinking about your major and the things you want to do. And we met our student advisors as well. If our advisor isn't there, you turn to her. We had a really good class. My teacher was so funny. She was always calling herself a big geek and we did a lot of fun things in that class.*

> *We're one of the classes that is doing a lot of work. We had to write a paper last semester on a book that we read. This semester we had a research project, but not a research paper, so all we had to do was present. Even sometimes if I didn't like the class, I liked the fact that we would meet together. I felt like FYS was like a rock or something I could always go back to. I had all these other classes with all these other people but I always had these same people to go back to.*

One of the most beneficial aspects of these programs was the presence of a central program advisor who provided immediate contact and a lasting source of academic and personal support for program participants.

At one institution involved in this study, students had the opportunity to participate in a comprehensive support program that included both financial aid and academic components. Students reported that the program's structure and design helped them form and maintain a network of peers that eased both their social and academic transition to college.

> *When we came in we all had the same required classes together—all the [support program participants]—so you got to meet with all the other people in your group and we all got over the main requirements in the beginning. We took First-Year Seminar together. It's a for credit course and it's more like to explore different subjects and my class was like an Insiders/Outsiders course. It's also a social thing—like that's how I know him so well.*

> *It wasn't hard for me, really. I just kind of came in...there were like [people from the support program] in my classes, so we would like talk with each other, so people would come up and be like, 'Hey, you know, I need help,' or for the midterm, 'Can we discuss this or can we discuss that.' You know, everybody needs help, so they just kind of go, who can help me?*

Students also experienced short-term learning opportunities that enhanced connections with fellow students and faculty. These included group work and community service projects that were part of a course requirement. These classroom-based learning communities provided other occasions to develop peer networks and social relationships.

> *I didn't start becoming really socially active until this semester. This came from when teachers had you break out into groups in your classes. I have never had any trouble meeting [people from my own ethnic group], but it has been more challenging meeting students otherwise.*

> *I had service projects in two different courses that I was involved in and because usually in the classes everybody comes on just on time or late and you don't have a lot of social time, but projects like that mean you work together and you have the chance to get to know people.*

The positive influence of learning communities on students' persistence patterns suggest that the better integrated students are into their academic and social environment, the more likely they are to experience satisfaction with their college experience and persist.

Financial Concerns

Our sample of students frequently cited financial issues as an omnipresent concern. Although finances do not fall within Tinto's framework of the influences on student integration, the ubiquitous and ongoing nature of students' financial worries impacted how BPS graduates viewed their college experience. Many worried about their ability to persist because of the precarious nature of their finances. These concerns had a significant impact on their ability to transition and integrate into their institutions.

Students found that work demands had a serious impact on their ability to fully engage with their college setting.

Students worried about the amount of debt they were accumulating and whether they would ever be able to out from under it even after they joined the workforce. They also shared concerns about how they would meet unexpected costs of textbooks and additional unforeseen college charges. These issues negatively influenced their college experience. Students frequently mentioned their surprise at finding unanticipated balances on their accounts and the stress involved in finding out they owed additional money to the college. This was largely a result of confusion about financial aid packaging. Some students revealed a lack of understanding about the nature of work-study aid and its commensurate obligation for on-campus employment. The result of unanticipated additional expenses due to a lack of awareness or misunderstanding about the nature of work-study created stress which might have been avoided if they had additional or clearer information.

> *I thought things were all good for this year, but at the end of the year they told me I had a difference of four hundred dollars and I struggled with that because I work, but I work for expenses and I didn't just have that money. I don't even know where the four hundred dollars came from, but I had to extend one of my loans to pay for it.*

> *I don't understand it. Your tuition costs twenty-six thousand dollars and you are getting twenty-eight thousand dollars; you*

should have money coming back to you. So, when I came here I was all set—I had extra money. But when I got my account balance, it said I owed like one thousand dollars. I don't understand how that happened.

Most students were unprepared for the high cost of textbooks. Students described strategies they used to avoid buying assigned texts, but were nonetheless stressed by the challenge of either coming up with the necessary funds or finding alternative ways of obtaining texts needed for their classes.

The biggest stress I've had is trying to get the books. I didn't have to buy any this year—I managed to get them from people, but it's so expensive, I can't really afford to buy the books I need for my courses.

I spent six hundred dollars on books this year and I bought mine second hand. I don't think I can buy them next year. I'm going to have to try to get them from the library. If you get there first, sometimes you can save yourself buying the book.

Another consequence of living off-campus was the experience students described of living a double life.

The thing that will kill you is the books. I must have spent over five hundred dollars this year on books, and we didn't even look at some of them.

Students were worried about the day-to-day costs of college, as well as the debt burden they would incur over the course of their education. They most often cited upperclassmen as the source of their information and described routine conversations with seniors that both informed and panicked them.

I have a friend who is going to be forty G's in debt. And most seniors I talk to have got all this money they owe.

I'm part of [campus organization], and there are a lot of seniors in there and I like to take the opportunity to ask them about being at [School's Name], and they're talking about how much money they are owing and I ask them all about did you do your work-study, did you turn your financial aid papers in on time? And they are always telling me they have all this money they owe.

Student concerns about rising education costs and increased debt burden were compounded by fears about limited employment opportunities in an economy where a graduate degree is often a requirement for a well-paying job. The idea of having to assume additional debt in order to pursue a professional or post-baccalaureate degree was overwhelming and felt like an insurmountable challenge.

I'm going to owe over forty thousand dollars when I'm done. And, anymore, your first degree will only get you so far. They say you have to have a master's now to get a good *job. I'm going to have to spend the rest of my life paying off these loans. I don't have to pay on them while I'm in college, but it's kind of scary knowing those will be waiting for me.*

I understand that you're going to have debt by the end of your college degree and you're going to be able to pay it back, maybe, but a friend of mine was saying that now a bachelor's degree doesn't actually get you a great job. You've got to have a master's degree because anybody can go to school now for four years and get a bachelor's degree, but not everybody can get a master's degree.

Aside from the few students who had received full scholarships, nearly all students interviewed expressed concerns about how to finance four years of education, in addition to how to pay for the smaller unexpected expenses already incurred over the course of their first-year of college.

While students at four-year institutions appeared to have more opportunities to participate in learning communities and support programs, they were challenged by the competing demands of work and family obligations and the need to commute to school in order to save money. The impact of these challenges was amplified in college environments where most students lived on campus. Additionally, persistent and substantial financial concerns negatively influenced students' ability to integrate into campus life. Our findings suggest that more opportunities to live and work on campus would decrease many of the impediments that BPS graduates faced at four-year colleges and universities and would consequently improve their engagement and ability to persist.

CONCLUSION

This "first look" at BPS graduates in their freshman year at eleven local colleges and universities reveals that student perceptions about their academic preparedness were confirmed by their academic performance. The study also provided insight into many of the existing conditions and practices of high schools and colleges that played a significant role in students' ability to succeed and persist in college. Further, our findings indicate that not all BPS students have access to the same preparation and support. These findings can be translated into areas for immediate attention and action by high schools and colleges in order to ensure that BPS graduates have *access to a college degree*.

High school preparation matters. Students' high school experiences made a huge difference in their ability to make a successful transition to college. Specifically, students were better prepared for college-level English than for college level math as evidenced in their participation and performance in developmental classes. In addition, many BPS graduates felt acutely aware of their lack of college success skills necessary for college level learning and expectations. These included academic skills such as note-taking, listening and meta-thinking, as well as the personal skills of self-advocacy, self-reliance, and academic discipline. Finally, the importance of messaging, college planning, and early exposure to college environments was underscored by students who received and those who lacked support in these areas.

Programs and policies that support first-year college students made a difference. Students who had access to faculty, strong advising programs, and academically-oriented peer groups felt better prepared to manage the academic rigor of college than those who did not. Furthermore, students who were socially integrated into the college environment, which in many cases included working and living on campus, felt a stronger connection to the academic community.

This study provides a starting point for discussions that can improve practice and inform additional research. The following recommendations translate the study findings into action steps—for both

secondary and postsecondary educators—that have the potential to lead to better outcomes for BPS graduates.

PRE-COLLEGE PREPARATION AND EXPERIENCE

College Preparatory Coursework

- Develop and expand opportunities for early exposure and experience with college level work through Advanced Placement and honors level courses and dual enrollment. There are some promising programs (many of which are the result of school-college partnerships) that offer students the opportunity to engage in rigorous coursework. Students need to receive the necessary academic support, especially in mastering college success skills, to meet college standards and expectations.

- Align the high school mathematics curriculum to teach the content and skills required for college level math. Students need to develop stronger math skills that come from curricula that address core knowledge and application skills necessary for STEM (Science, Technology, Engineering and Math) disciplines. BPS graduates' lack of math preparation led to low pass rates in remedial courses and a reluctance to enter STEM–related majors.

- Facilitate stronger communication between high schools and colleges about expectations for college-level work. High school teachers and guidance staff need regular and ongoing feedback from college staff regarding former students' performance. At the same time, college faculty and staff who work with entering students, require up-to-date information about students and their sending high schools in order to provide appropriate support.

- Create a K-16 agenda to align high school exit standards and curriculum. Advocate for policies that hold both K-12 and higher education accountable for student outcomes.

- Ensure that high school curricula prepare students for tests of college readiness as well as to pass high school exit exams. In addition to the MCAS, students should take the Accuplacer (or a similar college placement exam) used prior to college entry to determine their academic readiness and, where appropriate, develop a skills building plan. Students should also have access to more preparation for the SAT or ACT exam.

College Success Skills

- Provide instruction and practice to help high school students acquire the academic skills and habits that support their independent learning. In addition to course content knowledge, students need the necessary skills to manage the transition to college and persist to a college degree. Knowledge about the tools needed, prior to enrolling in college, will help students develop study and organizational skills, as well as the discipline, time management, and self-advocacy skills needed to identify and utilize available supports and resources at college.

- Offer professional development for teachers and staff that demonstrates how to embed college success skills into the high school curriculum. Reinforcing these skills in high

school will provide students with multiple learning and practice opportunities to assure that they become habits.

Messaging, Planning & Exposure to College Environments

- Establish structures and policies that set high expectations for high school students to assume responsibility for their own learning. Students that came from high school environments that did not hold them to high standards lacked the academic discipline necessary for college success.

- Create programs to fill the gap between high school graduation and fall enrollment to foster collegiate networks. Targeted efforts to build a cohort of students attending a similar institution will provide an academic community to support the transition to college. Opportunities for students to establish connections to campus faculty and staff will increase their likelihood of becoming engaged with the campus community.

- Increase opportunities for students to receive early college exposure and support with the college planning process and include SAT preparation as part of that process.

COLLEGE EXPERIENCE & ENVIRONMENTS

Academic Experiences & Environments

- Assess the effectiveness of existing advising structures for different student populations with diverse needs, especially for commuting and working students.

- Improve communication about degree requirements and transfer procedures through written and web-based materials and advising programs. Provide this information through multiple venues and on multiple occasions. Students are often overloaded with information and do not absorb important information especially early in their college experience when they are overwhelmed and anxious.

- Re-examine the specific needs of students enrolled in developmental courses to minimize the impact that non-credit bearing courses have on degree completion. While students may require remediation in different subject areas, they also need to feel that they are making progress towards a degree.

Student Engagement & Integration

- Increase opportunities for campus-wide learning communities, both in and out of the classroom, to enhance the development of peer academic networks. Provide incentives for faculty to connect and interact with students outside the classroom, especially during students' first year.

- Create support programs that build peer networks and create connections to a smaller community within the larger college environment. Examine best practices identified in the research literature to inform efforts that support and connect students to the academic community.

- Provide on-campus housing, on-campus employment, and funding for college related expenses (i.e. textbooks, computers, materials) as part of a student's aid package. Include information on financial literacy as part of a required First-Year Seminar.

FURTHER RESEARCH

- Expand the study of BPS graduates beyond their first year to identify additional areas for intervention and improvement. Gathering and analyzing longitudinal data on BPS graduates will provide important information on the factors that influence student persistence and success over the long term.

- Increase the number of colleges and universities and students sampled. This study reflects the experiences of BPS graduates at eleven institutions. A larger sample of institutions will provide important data on how variables such as size, institutional type, and geographic location impact students' experience and ability to succeed in college.

- Examine students' high school transcripts to relate course-taking patterns in high school to preparedness and success in college. Comparing high school and college transcripts will help schools and colleges evaluate the use of more closely aligned curricula and standards in an effort to promote persistence and college success.

Boston students have benefited from school improvement efforts, university outreach initiatives, and education reform at the local, state and national levels aimed at improving academic achievement and college access. At the eleven local colleges and universities that participated in our study, Boston Public School graduates are making their way through the first year of college. For some of these students, high school preparation and targeted supports in college made for a successful transition. For others, the transition was met with numerous challenges. Whether we look at the high school experience of BPS graduates or the postsecondary supports in place to retain them, the message is clear: we need to do more to ensure that college access for Boston graduates includes access to a college degree. Failure to do so has huge implications for our society, our schools, but most importantly, for our students.

RESEARCH NOTES

In 2006, the Boston Higher Education Partnership (BHEP) undertook a study of Boston Public School (BPS) graduates' experiences during their first year in college. The goal of the study was to understand how students' experiences in high school and college prepared and supported their transition to postsecondary education. We also hoped to learn more about the ways in which academic preparation translated into college readiness for Boston graduates and to identify areas for further research and improved practice.

Data Collection

In March 2006 BHEP member colleges and universities were invited to attend a meeting to provide input into the research project. Representatives from fourteen different institutions—including community colleges and four-year colleges and universities—met to discuss concerns about the transition and persistence of BPS students at their institutions and to offer suggestions regarding the overall aim and scope of the proposed research. Based on this input, the BHEP drafted a research proposal that was sent to all BHEP member institutions (including ones which were not represented at the initial meeting). Initially, twelve institutions agreed to participate; in the end, eleven institutions took part, including 3 community colleges and 8 four-year institutions. The community colleges that participated were: Bunker Hill Community College, MassBay Community College, and Roxbury Community College. Four-year institutions that participated were: Berklee College of Music, Fisher College, Massachusetts College of Art, Mount Ida College, Pine Manor College, Suffolk University, University of Massachusetts Boston, and Wheelock College.

Research began in April 2006 and was comprised of 3 main components:

- Qualitative data accumulated through focus groups with first-time, full-time Boston Public School (BPS) students in their second semester at participating institutions
- Qualitative data gathered through focus groups with BPS guidance staff

- Quantitative data provided by first-year college transcripts of BPS graduates at participating institutions

The following sections address each of these components of the research project in detail and provide, where appropriate, specific information about the participating institutions and participants.

Focus Group Sessions with BPS Graduates

The first component of the research included focus groups with BPS graduates in the months of April and May 2006. Each participating institution designated a staff person to organize a time and place for the BHEP Research Associate to meet with a group of between 5 and 10 students. Students were invited to participate using the following criteria:

1) Inclusion in the college's federal IPEDS (Integrated Postsecondary Education Data System) cohort of first-time, full-time students who entered in the fall of 2005

2) Boston Public School graduate in 2003, 2004 or 2005

Focus groups ranged in size from 1 to 7 people. In total, fourteen students from 3 community colleges and thirty-five from 8 four-year institutions participated, bringing the total number of BPS graduates who participated in a focus group to forty-nine. These students were graduates of nineteen different BPS high schools; 9 students attended one of Boston's exam schools, forty students attended a non-exam high school.

Table 9: Focus Group Participants by Race

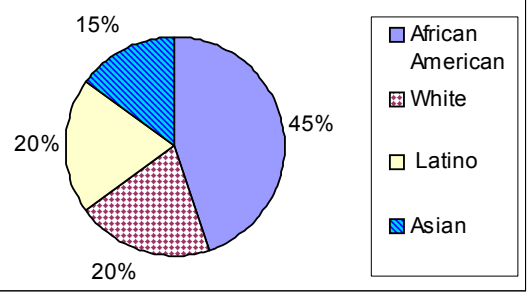
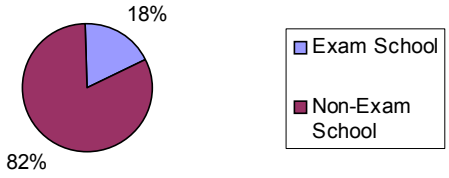


Table 10: Participating Students by High School Type



Prior to the start of each focus group, college administrators were asked a series of questions about campus programs designed to support students' transition and persistence. Specifically, administrators were asked to provide information about:

- first-year student orientation programs or transition programs
- particular center(s) for learning support
- services and other programs/services
- the living situation for most students at their institution and for most BPS graduates specifically
- living/learning communities and students' participation in these communities
- mentoring program(s) on campus
- process for declaring a major and general academic requirements

Responses to these questions were used to inform focus group sessions and prompt the researcher to ask additional questions about specific programming and practices.

At the start of each session, students were asked to complete a 1 page survey (Appendix A) about: their education and any programs they had participated

in prior to college, the number of hours they worked while in college, their participation in various campus activities, and their interaction with different types of support programs in college.

All focus group sessions were recorded once students were informed of the purpose of the study and their consent had been obtained. Each participating student was entered into a drawing for a twenty-five dollar *Barnes and Noble* gift certificate. In most cases, food and beverages were provided by the host institution.

Students were asked questions reflecting on 5 primary themes: (Appendix B)

1) support they received in high school relative to their a) academic goals, b) academic preparation for college, and c) preparation for college environments and expectations
2) academic and social experiences since entering college
3) perceptions of support structures (academic and non-academic) at the college they attended
4) use of support services as well as concerns about why they had or had not used them
5) levels of involvement and engagement in campus life and in the classroom, as well as perceived impediments to becoming involved

Data collected were transcribed, entered into *NVivo* (a qualitative data processing program) and coded into various nodes representing themes and sub-themes that emerged through a review of all focus group data. These themes became the categories presented in this final report.

Focus Group Sessions with BPS Guidance Staff

Focus group sessions with BPS guidance staff occurred in June 2006. One session was formally organized with the help of the Assistant Director for Unified Student Services/Guidance & Student Support Services. A second session was arranged for two guidance counselors who were not able to attend the formally organized session. Data from both sessions were included in research findings. Both sessions took place in BPS guidance counseling offices. In total, 7 members of BPS guidance staff participated in these sessions. Guidance counselors who participated did so with no other incentive than the opportunity to share their observations and concerns regarding the transition and persistence of BPS students in postsecondary education.

In these sessions guidance staff were asked to reflect on:

1) high school programs that prepare students for college
2) programs and practices that aid students in the transition from high school to college
3) the most pressing issues facing their students as they transition to college
4) feedback they receive from students about environmental, academic or personal factors that students were challenged by or benefited from in college
5) strategies they employ for ensuring college-readiness
6) the kinds of information they find most useful in helping students through the processes of college choice and college preparation

As with qualitative data from student focus group sessions, data collected were entered into the *NVivo* software program, coded into existing nodes (from the review of student data), and coded into new

nodes representing concerns specific to BPS guidance counselors.

Quantitative Data Collection and Analysis

Quantitative data collection occurred between June and August of 2006. All participating institutions were provided a list of BPS high school CEEB codes to identify BPS graduates and asked to provide anonymous student record data. Specifically, we asked institutions to provide the following data:

1) student course-taking records
2) demographic and calculated variables for *all* BPS graduates from the years 2003, 2004 or 2005 in their fall 2005 IPEDS first-time, full-time cohort

Participating colleges and universities provided the BHEP with 2 data sets (Appendix C). Data set A contained records per student with information about all courses taken by the established cohort of students in their first year of college. Data set B included 1 record per student containing demographic variables and information about their preparation for college and their academic performance.

All data were standardized and uploaded to 2 common SPSS databases. In addition to including standardized raw data collected from participating institutions, various dummy variables and calculated variables were created in both files for the purposes of further analysis. These additional variables were:

Data set A – Course-taking Records – Additional Dummy and Calculated Variables

- dummy variable - student was from an exam school or not
- coding for course type—including codes for developmental math, 100-level math, developmental English, 100-level English
- standardized numeric grades (based on traditional 4.0 scale)

Table 11: Sample Group Demographics

	Community Colleges	Four-Year Colleges	All BPS Graduates in the Sample
N	233	232	465
Gender: Male	44%	30%	37%
Gender: Female	56%	70%	63%
Race/Ethnicity - Black	37%	28%	32%
Race/Ethnicity - Hispanic	23%	19%	21%
Race/Ethnicity – White	19%	15%	17%
Race/Ethnicity – Asian/Pacific Islander	15%	22%	19%
Race/Ethnicity – Unknown	2%	9%	6%
Race/Ethnicity - Other	3%	7%	5%

- only institutional credits attempted (not including developmental and ESL courses)
- only institutional credits earned (not including developmental and ESL courses)

Data set B – Demographic Data – Additional Dummy and Calculated Variables

- dummy variable – student took a developmental course or not
- dummy variable – student took an ESL course or not
- dummy variable – student was from an exam school or not
- dummy variable – student persisted until the start of spring semester
- dummy variable – student persisted until the end of spring semester
- number of developmental courses taken Fall 2005
- number of developmental courses taken Fall 2005 and Spring 2006
- number of ESL classes taken Fall 2005 and Spring 2006
- cumulative credits earned without developmental or ESL courses Fall 2005
- cumulative credits earned without developmental or ESL courses Fall 2005 and Spring 2006
- total credit attempted (including developmental and ESL courses)
- total credit earned (including developmental and ESL courses)

These fields, in addition to other raw data fields included in the initial downloads, were used to run various frequency, crosstab and descriptive data reports for inclusion in the report.
The academic transcripts used in our evaluation included records representing four hundred sixty-five students. See Table 3 for specific demographic information. Graduates from thirty BPS high schools were included in the files. Therefore, since each student included multiple records, three thousand, six hundred forty-nine records in total were used.

Challenges to Data Collection

As with any research, a number of challenges arose in data collection and analysis. Within this study these included the size of the focus groups and the quality and availability of certain data. While we intended for focus groups to be comprised of between 5 and 10 students, numbers at 3 out of the 11 participating institutions fell under this range. While results still contributed to overall analysis of BPS graduates' experiences, this led to under-representation of these colleges in qualitative research findings.

As a result of challenges experienced with the quality and availability of certain quantitative variables, we were not able to perform some of the calculations originally intended including: cumulative 1st year GPA and average Accuplacer scores (which were too varied and often not available). We were not able to conduct analyses based on program or major at participating four-year institutions because of the variability in policies governing major declaration, many of which allowed and encouraged students to wait until their second year of college or later.

BHEP Persistence Study
Student Survey

1. What high school did you attend?				
2. Were you a part of a small school or small learning community?	Yes		No	Don't Know
3. Did your parents attend/complete college? Mom:	Attended		Completed	Did not attend
Dad:	Attended		Completed	Did not attend
4. Are you a transfer student?	Yes		No	
5. While in high school, did you participate in any pre-college preparation programs? *(Circle all that apply.)*	GEAR UP	Upward Bound	College Bound	Dual Enrollment Courses
	Urban Scholars	Other: please describe		
6. Did you participate in a summer or other transition program prior to entering this institution?	Yes		No	
Name of Program:				
7. Are you currently working while in school?	Yes		No	
On Campus/Work Study: How many hours/week				
Off campus: How many hours/week				
8. What are your living arrangements?	On campus	Off campus-w/family	Off campus-w/friends	Off campus-alone
9. Have you or are you taking developmental (not for credit) courses?	Yes		No	
10. Did you participate in a Freshman Orientation Program?	Yes		No	
11. Are you participating in the Student Success Program?	Yes		No	
12. Have you ever visited the Tutoring and Academic Support Center (TASC)?	Yes		No	
How often do you visit?	Weekly	Monthly	Once per semester	Never
13. Have you ever visited the Center for Self-Directed Learning (CSDL)?	Yes		No	
How often do you visit?	Weekly	Monthly	Once per semester	Never
14. Do you participate in campus/college activities?	Often	Sometimes	Rarely	Never
If yes, which ones?				
15. How often do you meet with your advisor?	Weekly	Monthly	Once per semester	Never
16. Is there another person on campus with whom you seek advice/support?	Yes		No	
If yes, what is that person's position?				
17. What forms of financial aid do you receive?	Federal/State Grants	Scholarships	Loans	Loans to Parents

Appendix B

Focus Group Questions for Students

Overarching Questions

- Are there specific things you can point to that you would say helped you get through your freshman year? (Services? People? Opportunities?)
- What are the most important things you have learned about staying on track in college?

(Probe about sense of preparation for challenges faced)

- What are some of the academic challenges you've faced in adjusting to college?
  How did you deal with them?
- What are some of the social challenges you've faced in adjusting to college?
  How did you deal with these?
- What are some of the other challenges you've faced in adjusting to college? (Financial aid?)
  How did you deal with these?

Support received prior to start of freshmen year

- Did you participate in any programs aimed at preparing you for college or introducing you to college life?
  Were they useful? Helpful components? Unhelpful components?
  Are there ways you can imagine them being more helpful?

Social experiences since entering college

- Did you have any kind of welcome event/orientation before classes started or when you first arrived?
  Did you go?
  If so, what was this like?
  Was it helpful?
  If helpful, what was most helpful?
  If not helpful, why not?
  What are there ways you think it could be more helpful? (Topics that should be addressed)
  Things you need to know that you weren't introduced to?)
- Did you participate in any college programs that were available to support you during your freshmen year? Describe.
  If so, did these programs help you in any way?
  If yes, how did they help?
  What do you think could have made the program more beneficial?
  If not, why did you not participate?
- What were your social experiences like in your first semester?
  Do you feel a change this semester?

- How did you meet most of your friends on campus?
- Are your friends in your same year (mostly first-year students)? Or, do you have upperclassman friends?
- Do you have a designated **mentor**?
  If yes, are they faculty or staff, upperclassmen?
  How has that relationship gone?

Level of integration to college life

- How many of you **work** in addition to attending college? How many hours/week?
  On campus or off campus?
  Do you think your working has had an impact your first year in college in any way?
- Do you feel like commuting plays a role in your college experience?
  How?
- How many hours per week, on average, do you spend at BHCC?
- What kind of activities or groups are you involved in at BHCC?
  If yes, how did you get involved in these activities?
  If no, do you know of any you would be interested in?
  f yes, what is preventing you from joining/participating?
- Do you participate in campus-wide events?
  Which kind (sports events, seminars)?
- Are there activities you participate in that are outside of the college/university?
- Who would you say you hang out with more often – friends from home or friends from college?
- Are your friends from home attending college?
  If not, do they want to go?
  What do they think about your going to college?
  If your friends do attend college, do you talk about your experiences?
  What are some of the experiences you have both had?
  Have they had different experiences?
  If your experiences are different, how are they different?

Motivation to attend and future goals

- What is/are the main reason(s) why you chose to go to college?
- Where do you see college fitting in – in terms of your career or future plans?
- Do you plan to transfer to a 4-year college?
- How many of you know what you want to major in?
  If no, do you know what general area you want to study in?
- How many of you have already decided what you want to do for a career?
  What do you plan to do for a career?
- Were your interests in what to study in college influenced by your high school classes, teachers, or experiences?

Support/Advising Structure

- How accessible are professors in office hours or by email? Do they encourage you to ask questions?
- Have you gone to professors with questions? Are they helpful when you have questions?
- How often have you talked to your counselor/advisor?
- What help was available in choosing your classes this year?
- What about choosing a major? A career?
- Through which sources did you receive advising? Advising counseling center, online advising? Assigned advisor? Group advising (for certain programs)?

Appendix C

BHEP Transition and Persistence Study
Quantitative Data Instructions

Please Submit by July 10, 2006

Examination of course taking and course success patterns

GOAL: The purpose of collecting and examining course taking and course success patterns is to investigate trends which may provide insight into academic challenges that arise as Boston Public School students transition from high school to college.

Downloads Required

Data set A – File with multiple records per student containing information about all courses taken in first year of college by BPS graduates from the years 2003, 2004 or 2005, in your Fall 2005 IPEDS first-time, full-time cohort

- unique identifier for each student the course record refers to
- names courses taken in the 1st and 2nd semester
- course numbers of those taken in the 1st and 2nd semester
- grades achieved for each course taken
- number of credits assigned to each course taken
- number of credits earned for each course taken
- variable categorizing course as 1)developmental, 2)ESL or 3)regular course toward major

Data set B – File with one record per student containing demographic variables and information pertaining to their preparation for college and their academic performance.

- unique identifier for each student (same as used in 1st download)
- 1st semester GPA
- 2nd semester GPA
- cumulative GPA at the end of freshman year
- calculated number of credits attempted in 1st semester
- calculated number of credits attempted in 2nd semester
- calculated number of credits earned in 1st semester
- calculated number of credits earned in 2nd semester
- CIP title for declared programs or majors
- BPS school of origin
- year of high school graduation
- number of pre-existing credits upon matriculation
- type of pre-exiting credits upon matriculation (AP, Dual Enrollment, etc.)

- Accuplacer score for Reading (if applicable)
- Acculplacer score for English (if applicable)
- Accuplacer score for Arithmetic (if applicable)
- Accuplacer score for College Algebra (if applicable)
- Accuplacer score for College Math (if applicable)
- SAT Score Math (if applicable)
- SAT Score Verbal (if applicable)
- SAT Writing (if applicable)
- TOEFL Score (if applicable)
- sex
- ethnicity
- current enrollment status

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