A "JUMP START" ON COLLEGE: How Early College Access Programs Can Help High School Students In Baltimore City

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Forward

The Abell Foundation commissioned this study to examine the potential of dual college enrollment and similar learning options for students enrolled in Baltimore City Public School System (BCPSS) high schools. What is the potential of dual enrollment as a strategy to improve high school completion rates, ease the transition to college for lower-achieving students, decrease the need for college remediation, and improve college graduation rates?

Dual enrollment permits high school students to earn transferable college credits before graduation from high school. It and other early college access programs have traditionally served high achievers, so the study further considers ways to enhance credit-bearing opportunities for students already planning to attend college. Strategies that introduce more rigor, teach college success skills, and ease the transition between secondary and postsecondary education could benefit large numbers of BCPSS students.

The Abell Foundation is publishing this report to support BCPSS in implementing its Master Plan for 2006-2008, which calls for a number of early college access programs. The Master Plan lists expansion of dual enrollment, AP, and higher education partnership activities as tactics for achieving its Goal 5: "All students will graduate from high school."

Multiple research studies have identified five strong predictors of college attendance and completion, particularly for minority and low-income students: academic preparation, social support, access to information, parental involvement and knowledge about college, and financial aid.[1] This report focuses primarily on the first two elements, academics and social support. However, all five elements should be considered vital to any college transition initiative.

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I. Introduction

In high schools across the nation, many of the best and brightest students are getting a jump start on college. Opportunities afforded by dual enrollment, Advanced Placement (AP), International Baccalaureate (IB), and other programs enable students to earn college credits before they graduate from high school. These programs are gaining in popularity and accessibility: during the 2002-2003 school year, 1.8 million high school students enrolled in AP courses, 1.2 million enrolled in dual enrollment programs, and 165,000 enrolled in IB courses.[2] These programs also are starting to show results. Research has found that students who earned college credits before entering post-secondary institutions earned more credits or passed more units, had a higher grade point average, and graduated at a higher rate than students entering without any college credits.[3]

The idea that early college access programs can serve anyone but the top students is relatively new. More importantly for Baltimore City, early college access models also show promise for underachieving and/or disadvantaged students who are at risk of dropping out of high school. Some programs, such as the Middle College High School at New York's La Guardia Community College, started in the 1970s as alternative high schools and include college credit and degree options. School systems are partnering with colleges and universities to create new program models that offer remedial education, social skills development, and the chance to experience college-level academics. National foundations are fostering development of Early College High Schools that feature rigorous instruction and supportive relationships. Support is growing for early college access models that serve underachieving students, but their reach remains limited.

In the middle – between accelerated programs for the best and brightest and initiatives for those at risk of dropping out – are options to help students at all academic levels stay in school, strengthen basic skills, experience college-level coursework, and potentially earn college credit. These options can range from early placement testing and college-based remedial courses during the school day to enrollment in a college enrichment course at night. Students may receive advising and support services in their high schools, at the local college, or at both. They may earn college credits, or they may just discover what college is like.

Along this spectrum of early college access options are several opportunities for BCPSS to diversify and increase learning opportunities for its high school students.

This report provides a primer on dual enrollment, early college access, college transition and similar programs as practiced in Maryland and throughout the country. It concludes by recommending approaches that can help more youth, not just high achievers, make a successful transition to college.

II. Why Early College Access?

The earliest dual enrollment programs in high schools date from the late 1970s, but interest in setting statewide early college access policies and funding has mushroomed since 2000, fueled by economic realities and the influence of the K-16 integration movement.[4]

Data indicate that higher education translates into higher wages and that all young people need access to higher education. Many of the jobs of the 21st century require it. Yet, despite efforts to increase college participation through Pell grants, talent search programs like TRIO, and other initiatives, the percentage of Americans earning a college degree has remained unchanged over the past two decades. Then and now, only 30 percent of the U.S. population earns a four-year degree. Those at the lower end of the income scale are least likely to obtain the credential.

This inability to expand the college-educated workforce alarms employers who need highly skilled workers. Educators are trying to increase college graduation rates by plugging holes in the existing pipeline. They are creating programs and support systems to help more underserved, middle- to low-achieving, and minority youth transition successfully from high school to college and ultimately earn a college degree.

Economics also drives efforts to strengthen curriculum connections between secondary and postsecondary education. The statewide K-16 integration movement is attempting to eliminate duplication between the secondary and postsecondary levels. Full integration of the K-12 and higher education systems into a seamless preK-16 construct would be ideal, but would prove costly and time-consuming. Therefore, states are pursuing more modest approaches, such as enhancing and codifying dual enrollment, dual credit, and related initiatives.

Maryland, and particularly Baltimore, with its high poverty and low educational attainment rates, stand to profit by the addition of high school programs designed to increase both college enrollment and retention.

III. A Primer: What Is Early College Access?

A NOTE ON TERMINOLOGY
A review of the national literature reveals diverse and often conflicting titles and definitions for programs that give high school students a "jump start" on college. These programs have been called credit-based transition programs, secondary-post-secondary learning options, and post-secondary enrollment option, among other names. In this study, the terms "early college access" or "college transition" are used to refer to the array of program models that might be employed by BCPSS.

A. Types of Early College Access

Eight different types of early college access programs are identified in the literature.

1. Dual Enrollment (DE) programs, sometimes called concurrent enrollment, enable high school students to enroll in college courses before they have earned their secondary diploma; that is, they can take high school and college courses at the same time. The coursework may count as credit either toward high school graduation or college. Other students may pursue courses that do not offer college credit, such as college remedial education. (DE courses, as defined for this report, do not offer both college and high school credit for the same course.)

There is no "one-size-fits-all" model of dual enrollment. Configurations and features vary widely, depending on the needs of the students and the capacity of the education partners. DE courses may be taught by college faculty or by high school teachers who have demonstrated the content mastery and pedagogical skills to merit designation as adjunct college faculty. Courses may be delivered in the high school, on the college campus, via distance learning, or online. Some high schools allow students to attend college-level classes during the traditional school day; others require that students enroll in college courses after school hours, on weekends, or during the summer. Cohorts of high school students may attend special sections scheduled exclusively for them, or individual students might enroll in regular college courses alongside college students.

Admission requirements usually are similar to those for incoming college students, but they may be modified for the high school population. Typical requirements include SAT scores, high school grade point average (GPA), academic placement test scores, interviews, writing samples, and/or other factors connoting adequate preparation for the rigors of college-level instruction.

Dual enrollment programs are relatively straightforward. Assuming no support services are offered, a college and a school system would negotiate funding and

procedure (unless already codified); develop a memorandum of understanding (MOU); promote the learning options to students and parents; and help students select and enroll in appropriate courses. Enrollment management and reporting may be the responsibility of the higher education institution, the public school system, or both. Most partnerships award college credits upon course completion. However, some colleges require that students "bank" the credits. Under such a system, the credits do not appear on a college transcript until after the student graduates from high school, officially enrolls in the college, and completes one or more credit courses as a matriculated college student.

2. Dual Credit (DC) programs, sometimes called concurrent credit, offer high school students the option of enrolling in courses that offer both high school and college credits simultaneously. The framework is essentially the same as that for dual enrollment: courses may be taught at the high school or college, by high school or college faculty; high school students enroll in cohorts or in individual courses; and admission requirements are set by the colleges. Funding and enrollment processes must be negotiated by the partners, unless codified by state law or regulations.

The hallmark of dual credit programs is that selected high school and college courses satisfy the learning goals and objectives of both educational partners. The alignment must be explicit and extend beyond course content. The offerings must be consistent in terms of rigor, performance expectations, behavior expectations, and pedagogy so that all students attending aligned courses have comparable learning experiences.

The process of aligning secondary and postsecondary courses to meet common goals and objectives can be challenging. Faculty and/or curriculum specialists representing both partners must work together to evaluate course content, align objectives and outcomes, and ensure that the final product represents college-level learning. Faculty may request stipends or other compensation for this additional alignment work. In Maryland, for a college course to be offered for high school credit, course content must be evaluated by the local education system and qualified by Maryland State Department of Education (MSDE) as meeting statewide curriculum requirements. Similarly, for a high school course to count as college credit, it must meet the same content standards as comparable college courses, and may require approval from the Maryland Higher Education Commission (MHEC), the institution's curriculum review boards, or other governing entities.

3. Advanced Placement Programs® offer rigorous courses and exams through which high school students may earn college credit. Most students enroll in standardized AP courses taught by high school teachers who have been certified by the AP sponsor, the College Board.

The College Board offers exams for 37 advanced-level courses in 22 subject areas including calculus, physics, European history, and foreign languages. AP course enrollment is typically free for the student, but the exam fee is $83. Fee waiver or reimbursement may be available for needy students; some jurisdictions pay the fee for all students who sit for exams.

AP exams are graded on a scale of 1 to 5. A score of 3 is considered passing by most school systems. However, many higher education institutions – including most in the University System of Maryland (USM) – will, with few exceptions, accept only grades of 4 or 5 for college credit. Furthermore, the AP course may not substitute for a core course in the student's chosen major. Also, although a community college may accept AP credits, a university may refuse those same credits when the student transfers to a baccalaureate program. Some colleges use the AP grade as a placement tool but will not award credits. The issue of whether or how AP courses are accepted for credit is significant in determining the value of the AP program as a tool for accelerating students' college progress.

4. The International Baccalaureate (IB) Program, offered in more than 100 countries, is a curricular model that offers rigorous liberal arts coursework created and administered by the International Baccalaureate Organization. IB is a comprehensive two-year curriculum that includes foreign languages, psychology, music and the arts, theory of knowledge, math and science for motivated, academically advanced students. Although an IB diploma is awarded to those who complete all exams, high schools may offer students the option of taking only select IB courses without earning an IB diploma. All program instructors must be trained and certified by the International Baccalaureate Organization (IBO).

As with the AP program, IB courses prepare students for internationally normed exams, developed and scored by IBO, which are graded on a scale of 1 to 7. Scores of 4 or higher generally lead to college credit, although postsecondary institutions set their own policies on credit award.

5. Tech Prep represents a partnership between public school systems and community colleges to offer a continuum of career-oriented coursework, formerly known as vocational education, that prepares the student for both work and college. Tech Prep is a sequenced program of career-focused study combining at least two years of secondary and two years of postsecondary education. Students typically earn college credit for one or two career courses while still in high school. Instructional programs may range from computers, construction, and criminal justice to health care, hospitality, and finance. (The broader term, "career and technology education" represents all career-oriented programs offered in high schools, regardless of whether they articulate to a two-year college degree program.)

Some Tech Prep programs operate through career academies. These small, career-themed high schools offer college preparatory programs that are guided by employers, colleges, and communities. They may operate as "schools within a school," with students taking career-oriented courses in cohorts, while attending academic courses alongside non-Tech Prep students. Some curricula, such as that used by the Academy of Finance, are based upon national standards. The National Academy Foundation provides curriculum expertise, guidance and professional development for schools that offer career academy programs.

6. Middle College High Schools (MCHS) are small, nontraditional secondary schools that typically serve underachieving, underserved, or at-risk students. The target students are not succeeding in conventional high school programs, but are deemed to have the potential to benefit from rigorous academic studies delivered in a nurturing, supportive environment. One unique feature of the MCHS model is its setting: the schools are located on college campuses, preferably in a designated building but sometimes spread across the campus. The programs utilize the resources of the higher education host to give the participants access to the library, technology, college skills prep courses (e.g., note-taking, study skills), career planning, athletic activities, and other services that may not be available in their public school system.

MCHSs operate as small schools with dedicated, highly skilled teachers and leaders who operate more like CEOs than principals in a public school system. Faculty members know each student individually and use teaching techniques suited to individual needs. MCHSs may offer eligible students the opportunity to enroll in college courses. However, some students may not qualify for college-level coursework, and college-level coursework may not necessarily result in college credits. Nevertheless, preliminary research indicates that many students not considered "college bound" benefit from attending high school on a college campus. They may or may not graduate from high school with earned college credits, but they have a greater probability of graduating from high school.

7. Early College High Schools (ECHS) also are small high schools, and some operate on college campuses. Both MCHS and ECHS programs focus on populations historically underrepresented in college: minority students, English language learners, low-income students, or first-generation college students. However, MCHS and ECHS program goals are significantly different. MCHSs target underachievers who may or may not earn college credits, whereas ECHSs offer middle and underachieving students the opportunity to complete both a high school diploma and an associate's degree or equivalent within four or five years. The ECHS programs start when students enter the 9th grade, although they may not begin college-level studies until the 11th grade.

The ECHS model is part of a national movement to restructure high schools and bridge the gap to college. With initial funding of $120 million from the Bill & Melinda Gates Foundation, Carnegie Corporation, Ford Foundation, and W.K. Kellogg Foundation, the initiative, overseen by Jobs for the Future, Inc., has opened 130 early college high schools in 23 states in the last five years. Maryland's one participant is the Gateway to College program at Montgomery College.

An ECHS uses the same course structures as other college transition models: college courses taught in the high school or on college campuses, taught to ECHS students alone or to mixed groups of ECHS and college students, or classes enrolling individual students in college classes. To help students master rigorous instruction, schools may create comprehensive wraparound services such as remedial education, social skills development, academic skills development (e.g., note-taking, study skills), and other support structures.

8. University-Assisted High Schools (UAHS) offer a third option that may be located on a postsecondary campus. The model was codified in 1989 by the University of Pennsylvania as a "mutually beneficial, collaborative partnership among communities, higher education institutions and public schools, where education can be improved through the application of research-based practice."[5]

As an example, the Gates Marshall Redesign Project supports partnerships between public Historically Black Colleges and Universities (HBCUs) and local school systems to create or redesign high schools in economically distressed areas. The Bill & Melinda Gates Foundation is providing $4.9 million over five years with technical support from the Thurgood Marshall College Fund that includes Coppin State University's Coppin Academy high school in Baltimore. The initiative builds upon the best practices of the ECHS and MCHS models, with a focus on students of color and unique programs, services, and resources available through HBCU colleges of education.

Participating students may or may not earn college credits before they graduate from the high school; however, they are expected to graduate college-ready. Programming is customized to meet the needs of the local community and the mandates of the local school district. A hallmark of the program is its focus on instructional development: HBCU education faculty provide professional development for the secondary teachers and serve as mentors. Program success will be measured by benchmarks such as high school graduation rates, college-going rates, advances in instructional practices, and sustainability of the model.

B. Program Delivery: Achieving a Balance of Academics and Support Services

The college transition program models cited above may be catalogued according to a variety of factors: those that offer college credit or high school credit or both; those serving at-risk or high- achieving students; those taught by college or high school teachers; those offered at college or high school classrooms. *Promoting College Access and Success*[6] identified program elements that have proven most effective with middle- and lower-achieving students using two parameters: the intensity of the learning experience and the depth of wraparound support services.

"Singleton" programs, according to Bailey and Karp, allow high school students to enroll in stand-alone college-level coursework, but offer no access to supplemental support services. Their primary goal is to expose these high school students to a college learning environment. Where possible, students can earn credits toward a college degree. These classes may or may not count toward the student's high school graduation requirements. With few exceptions, singleton programs benefit high achievers who are academically qualified for college-level coursework and work on the assumption that participants have the requisite skills and maturity for college success.

- AP courses that provide college-level instruction without the college campus experience are a prototypical singleton design.
- Another singleton option permits individual students to attend college classes alongside college students. This option gives students access to a broader range of courses than may be taught in their schools, while also providing first-hand experience with college-level learning.
- College courses taught by college faculty in the high school classroom are also considered singleton programs. This approach eliminates transportation problems that may prevent students from reaching the college campus.
- Some middle- and lower-achieving students complete high school requirements and pass tests mandated by the No Child Left Behind Act, yet lack adequate math, reading, or writing skills for college. Developmental education classes taught at their local college or in the high school may help students strengthen basic skills and reduce or eliminate the need for remediation after high school. One local example is the Community College of Baltimore County's PEP program, which allows Baltimore County Public School students to enroll in remedial classes when they have exhausted learning opportunities in their own schools.

Comprehensive programs provide college-level instruction during most of the junior and senior years in high school. Their primary benefits are advanced academics and the opportunity to earn college credit. Comprehensive programs may not offer a "real" college experience, in that classes may meet in their high school or at a work site, rather than on a college campus. Nevertheless, students in these

programs may be able to earn 12 or more credits toward a college degree. There are three broad types of comprehensive programs:

1. The academically rigorous International Baccalaureate (IB) program offers a full two-year curriculum for high achievers. Students attend most classes at their high school and earn college credits by virtue of internationally normed exams.
2. Early College High School (ECHS) offers high achievers the option of earning both a high school diploma and an associate's degree in four to five years of intensive study. A limited number of support services may also be available.
3. Tech Prep offers career-oriented programs leading to an associate's degree in the related field. Tech Prep students not only have the potential to complete an associate's degree in less than two years, but also are often eligible for Tech Prep scholarships at community colleges.

Enhanced comprehensive programs provide pre-college, college-prep or college-level coursework combined with career guidance, counseling, mentoring, tutoring, and other services that can help prepare students for future success. The most frequently cited example is the Middle College High School (MCHS). Program goals may include high school graduation, academic enhancement, college-level learning, and exposure to the college environment. College credit may or may not be a goal.

Early College Access Program Categories by Intensity of Experience and Services

Models by Intensity	Program models	Primary audience	Primary goals	Support services	College credit
Singleton	DE, AP, DC	High achievers	Expose students to college-level work; enrich high school experience; earn college credit	No	Likely
Singleton/ Basic skills	DE	Middle achievers	Strengthen basic reading, writing and math skills before enrolling in college	No	No
Comprehensive	IB, ECHS	High achievers	Earn college credit, prepare for college	No	Yes
Comprehensive/ Tech Prep	Tech Prep	Middle achievers	Earn college credit, guide transition to college	Limited: career counseling, academic advising	Yes
Enhanced comprehensive	MCHS	Middle and low achievers	Prepare at-risk students socially, emotionally and academically for college	Extensive: counseling, tutoring, mentoring	Maybe

III. Outcomes Data: The Measure of Success

One goal of this study was to identify early college access models that have a proven record of success, particularly with low- and middle-achieving students and among groups under-represented in higher education. Despite the great interest in early college programming, outcomes data that demonstrate long-term success are scarce. Thorough comparisons of participant and non-participant performance data that use measures such as high school GPA, and graduation rates, and college enrollment, GPA and completion rates are lacking.

The U.S. Department of Education Office of Vocational and Adult Education study undertook a study to learn how dual enrollment, AP, Tech Prep and similar programs can help all youth make a successful transition to college. The study concluded:

> *"There has been limited research on these programs. Some descriptive and anecdotal data are available [Bailey and Karp, 2003]. Yet little is known about how the programs work, much less their effectiveness in facilitating successful transition to college."*[7]

Similarly, the American Youth Policy Forum reports:

> *"As evidenced by our research, even the 'good' research in this field is inadequate. Poor data are an issue not just for SPLOS (Secondary-Post-Secondary Learning Options), but this remains an issue for education and youth programming in general. Typically, SPLOS collect and maintain qualitative data that provide information on students' attitudes and feelings toward programs, not quantitative data demonstrating their success in college-level coursework or longer-term outcomes, such as college graduation or job attainment and wages."*[8]

Available data typically measure the performance of academically proficient and high-achieving students who are likely to earn college degrees with or without a special transition program. This is true primarily because "the idea that [dual enrollment programs] should be accessible to a broader range of students is a new approach."[9]

Researchers and program managers, however, cite many reasons for the dearth of outcomes data for college transition programs for all students.
Systematic data collection for long-term evaluation is not a high priority.

- Many programs choose to measure only short-term outcomes such as program completion.
- Public school systems typically do not track students after high school graduation
- Secondary programs lack the capacity in staff, time, technology, and expertise for detailed data collection and analysis.
- Postsecondary partners generally have greater capacity for data research, but have difficulty obtaining K-12 data.

- Participants are enrolled in two distinct systems K-12 public education and higher education, whose records are not linked.
- Confidentiality issues limit data sharing. For example, DE students are considered "adults" by the colleges, so public schools may be unable to access grades and other outcomes data.
- Public schools are prohibited from sharing data that include individual student identifiers (names, Social Security numbers). Without those identifiers, long-term outcomes evaluation is impossible.
- Without access to detailed high school performance data, researchers cannot determine which features of a given program contributed to better student performance. Without detailed data, they cannot prove how or why the programs worked.
- Few postsecondary institutions conduct follow-up studies to measure the success of their graduates in the workplace or in post-graduate studies.

A. Participation in early college access programs is growing

Dual enrollment, dual credit, exam-based courses, and other early college access models are gaining in popularity. Increasingly, they are the focus of research studies, pilot projects, and national initiatives by education organizations, government agencies, private foundations, and professional associations.[10] Despite the enormous attention being given to college transition issues, there is no national source of information on programs that engage high school students in college-level coursework. Two major studies by the National Center on Education Statistics (NCES) published in 2005 offer some preliminary baseline data.

1. *Advanced Placement (AP) and Dual Credit (DC) courses most common in U.S. high schools:*

The first study, based on a survey of 1,499 regular public secondary schools regarding the prevalence of and enrollment in formalized dual credit and exam-based courses (i.e., AP and IB), found a significant number of high school students engaged in early college programs.[11]

AP courses are most prevalent with dual credit offerings closely following. High schools in urban areas are least likely to offer students any early college access options. Dual credit coursework is offered equally on college campuses and in high schools, with a majority of these classes taught by high school teachers.

The study reports the following for academic year 2002-2003:

- Nationally, early college program enrollment was estimated at 1.8 million students in AP courses, 1.2 million in DC courses, and 165,000 in IB courses.
- Nationally, a majority of public high schools offered some form of college credit-bearing coursework. Seventy-one percent (71%) of those schools offered DC courses, 67 percent offered AP, and 2 percent offered IB. Many schools offered more than one option; only 13 percent offered none.
- Schools located in cities were the least likely to offer DC or AP; 20 percent of schools with high minority enrollments offered none.

Other key findings:

- Location: 65 percent of schools offered dual credit courses on a college campus, 61% offered them on in the high school, and 25 percent used distance learning technologies.
- Instruction: High school faculty taught 64 percent of academic courses. Three-fourths
- (76%) of CTE Tech Prep courses were delivered in the high school setting
- Student composition: Among public schools that offered academic DC courses on college campuses, 82 percent enrolled both secondary and postsecondary students, while 18 percent enrolled only high school students. Similarly, of the schools offering CTE dual credit, 78 percent enrolled both high school and college students.
- Admission requirements: 62 percent of schools had minimum requirements to enroll in DC, potentially limiting participation to higher-achieving students.

2. A majority of colleges and universities serve high school students, but few high school students currently participate.

The second study surveyed 1,600 degree-granting postsecondary institutions that receive Title IV federal funding and offer dual enrollment (DE). Data was weighted to yield national estimates.[12]

For the 2002-2003 school year:

- Overall, 57 percent of colleges and universities had high school students taking courses for college credit. Ninety-eight percent (98 percent) of public two-year institutions enrolled high school students, compared to 77 percent of public four-year institutions and 40 percent of private 4-year institutions.
- Approximately 5 percent of the U.S. high school population took college-level courses through postsecondary institutions.

Other vital statistics:

- Location: 73 percent of two-year public colleges offered courses on a high school campus, compared to 47 percent of public four-year and 28 percent of private four-year institutions.
- Instruction: 26 percent of institutions offering college credit courses on high school campuses employed only college instructors to teach those courses, 32 percent employed only high school instructors, and 42 percent used both high school and college instructors.
- Curriculum: 89 percent stated their DE courses use the same curriculum as regular college courses.
- Admission requirements: 85 percent of institutions have academic eligibility requirements for high school students, but only 38 percent use the same standards for high school and college students.

3. Few post-secondary institutions offer dual enrollment for at-risk students

Of particular interest to Baltimore City are the early college access models designed specifically for students at risk of failing or dropping out from the K-12 education system. Only 5 percent of the post-secondary institutions with dual enrollment programs reported that they offer programs for those students.[13] Among programs for at-risk populations, 39 percent focused on CTE courses, 34 percent focused on academics, and 21 percent offered both. Sixty percent of the colleges offering programs for at-risk youth provide additional support services, including academic advising (84 percent), tutoring (82 percent), study skills workshops (76 percent), college application counseling (75 percent), financial aid counseling (62 percent), and other services such as mentoring and career counseling (38 percent). NCES did not request data regarding the impact of these services on student performance.

B. Promising Program Results

Despite a lack of long-term data on early college access programs, several approaches provide evidence of success.

Participation in AP boosts college success for all student groups.
Recent studies appear to support the argument that the experience of taking a rigorous college-level course makes AP courses worthwhile even for students who do not pass the AP exams. An NCES study indicates that an AP experience – regardless of the exam score – significantly improves the likelihood of college success.[14] Researchers compared AP students to peers with similar academic profiles and characteristics. They found that students who earn an AP exam grade of 3, 4, or 5 have a higher probability of completing college than comparable students who did not enroll in AP. Even those students who earn an exam grade of 1 or 2 have a higher probability of college success.

Probability of College Completion After Taking Advanced Placement Course

Student group	AP exam grade of 3,4,5	AP exam grade of 1,2	Took AP course, not exam
African-American	28% higher	22% higher	16% higher
Hispanic	28% higher	12% higher	10% higher
White	33% higher	22% higher	20% higher
Low-income	26% higher	17% higher	12% higher
Not low-income	34% higher	23% higher	19% higher

Early College High School increases high school attendance and student engagement.

Evaluation conducted by the American Institutes for Research and SRI International indicates some early if limited success.[15] The schools have created a positive atmosphere, as reflected by a 91 percent average daily attendance. Students appear engaged and benefit from small classes and personal attention. Ninety percent of the ECHS programs had some students enrolled in college courses. However, it is too early to tell whether Early College High Schools will be effective in raising high school student retention and college graduation rates.

C. Program Models for Low-income and Minority Students

A review of the literature yields common practices among program models that seem most promising for this audience, even if measured only by short-term results such as high school graduation rates. In many of these programs, earning college credit is a lower priority than helping students develop the academic, social, and emotional skills for success after high school.

Martinez and Klopott[16] examined 18 program models and identified four practices commonly credited for the success of low-income and minority students: a rigorous core curriculum; curricular alignment between high school and college; personalized learning environments; and support in developing social networks and instrumental relationships. The Community College Research Center conducted focus groups and interviews with experienced program instructors and administrators and identified five characteristics of high-quality programs: outstanding faculty; strong curriculum; non-academic services that offer social and psychological preparation for college; strong liaison between the educational partners; and outreach to students and parents. The center also identified three essential elements for programs targeting middle- and low-achieving students: a sequential developmental curriculum lasting a year or more; individualized academic programs and support services; and general information about college, particularly for first-generation college students.[17]

V. State Policy And Funding For Early College Access Programs

States have used many early college access models. Some models are tightly regulated by legislative mandates; others leave details to the discretion of the institutional partners. Some serve only the best and brightest high school students; others reach out to diverse student populations, including students at risk of not finishing high school. Needless to say, state policy and funding can be critical sources of providing impetus and direction to early college access programs.

Depending on the definitions, between 38 and 40 states have instituted policies, regulations, and/or funding to guide college access practices.[18] Legislative mandates vary widely. Support service systems range from minimal offerings for singleton programs to a full menu of academic, social, and services in enhanced comprehensive programs.

Most early college access programs rely, at least in part, on tuition paid by parents and students.
In its comprehensive surveys of early college access programs across the country, NCES identified a range of funding mechanisms even as some states were reviewing their policies and considering change.[19] Federal funding is limited because Pell grants cannot be used by high school students to attend college classes. In light of the declining value of Pell grants – they currently cover only 40 percent of a public four-year education, compared with 84 percent in 1980[20]– and considering the growing federal deficit, a change in this funding policy is unlikely.

Recognizing that individual institutions or school systems may use multiple funding sources for their initiatives, researchers report the following from surveys of higher education institutions:[21]

- Nearly two-thirds of all higher education institutions offering dual enrollment reported that students or their parents paid at least a portion of tuition, and 20 percent reported that families assumed the full cost of tuition.
- 38 percent reported that colleges contributed actual dollars or tuition waivers.
- 37 percent reported that high schools and school districts provided funding.
- 26 percent reported that state governments were a source of funding.
- 9 percent used other sources, such as grants, and scholarship funds from businesses and foundations.

A. Successful State Policy and Funding Models for Early College Access

A State Policy Chart (Appendix I) highlights the work done by Karp, Bailey, Hughes and Fermin to track features of state programs and provide periodic updates.

Described below are promising policies and funding mechanisms implemented around the country.

1. Florida: Florida operates the country's most highly articulated and centralized public education system. Laws passed in the early 1970s created a common course numbering system for higher education, facilitating transferability of credits and, in essence, creating a statewide, comprehensive 2+2+2 structure for grades 11 through 16. Legislation also mandated that all two-year and four-year state institutions offer dual enrollment/dual credit courses in order to expand high school learning options, increase academic rigor, and shorten the route to a college degree. An Articulation Coordinating Committee evaluates high school courses for dual credit eligibility, and assigns prefixes and numbers consistent with the common course numbering system. Through this review process, the state guarantees credit transfer among its colleges and universities.

Florida law requires colleges to negotiate a new agreement with local school districts every year, detailing the responsibilities of each partner. The legislature also created Florida's Academic Counseling and Tracking for Students (FACTS) online clearinghouse and advising system for college/career planning.

> *Funding:* Because Florida mandates DE participation, it created a funding system that punishes neither institutional partner. School districts receive their full average daily attendance (ADA) -based funding regardless of the number of students enrolled in DE, but they must subsidize books and fees at $125 per student per course. Colleges and universities receive their normal full-time enrollment (FTE) -based funding for each DE student, but must waive tuition. This system permits "double dipping" by the providers, with both secondary and postsecondary institutions receiving normal funding for each student who splits his/her time between high school and college. In return, however, the colleges forgo tuition, and the public schools must fund books and fees.

2. Washington State: The Learning by Choice law (1990) expanded options for high school students to experience college and earn college credit before high school graduation. One element of that legislation, the Running Start program, enables qualified 11th and 12th graders to enroll in courses at 34 technical and community colleges, three state universities, and two colleges. In contrast to Florida's highly regulated system, Learning by Choice provides optimal flexibility; there are no state-mandated entrance requirements. Parents are given access to the information they need to make independent, informed choices about the best options for their children. Students apply directly to the college or university, and each institution decides eligibility using its regular admissions procedures. Three state agencies share

oversight and provide technical assistance. This model has been replicated in other states, including Oregon and Minnesota.

> *Funding:* Running Start funds flow from the state to the school district at a per-pupil rate. Postsecondary institutions invoice the public schools for each student attending college classes at a rate of $98 per academic credit/quarter or $116 per Tech Prep credit/quarter (for the 2005-2006 school year). Public schools retain 7 percent of state funds for counseling and overhead. Students do not pay tuition but are responsible for their own books and transportation. The program does not fund developmental education courses; if students do not meet college academic admission standards, they are referred back to their high schools for remediation. According to the 2005-2006 Annual Progress Report, Running Start saved taxpayers, parents, and students more than $71.3 million.

3. Iowa: State law allows eligible junior and seniors to enroll in DE courses, but does not set admissions requirements. High schools must pay for students to take dual enrollment courses at a college if an equivalent course is not available at the high school. State policy requires that all community college adjunct instructors participate in college-sponsored professional development, as well as DE-specific training activities.

> *Funding:* High schools use their ADA funding to reimburse colleges for the cost of DE courses. To encourage Tech Prep participation, the state reimburses high schools at the regular ADA level for academic courses, and at 1.48 times the ADA for Tech Prep DE courses. Additional costs (supplies, equipment, added salaries) must be funded through the high school operating budget. The colleges do not receive FTE reimbursement for DE enrollees. If a student fails the DE course, he/she must reimburse the high school for program costs.

4. Virginia: The Virginia Initiative comprises three primary program elements: Senior Year Plus, Virginia Virtual AP School, and the Commonwealth College Course Collaborative (CCCC). The last element offers a coordinated approach that dictates some learning options while respecting institutional diversity. Statewide education leaders defined three core subjects eligible for dual credit: Biology, U.S. History I and II, and Psychology. All qualified secondary students may pursue these subjects through DE, AP, or IB, and may earn as many as 13 college credits. All public postsecondary institutions except the Virginia Military Institute (15 four-year and 24 two- year institutions), as well as most private colleges, have agreed to accept those core course grades for degree credit.. CCCC also encourages institutions to identify other courses for which they will award credit to high school students. As a result,

students may earn up to 20 additional degree credit hours in subjects such as composition, economics, math, physics, and the arts. A Virginia high school graduate can start higher education with as many as 30 credits.

Funding: State appropriations "hold harmless" both secondary and postsecondary institutions for DE. That means high schools continue to receive full ADA funding, and community colleges receive FTE funding for participating high school students even if they attend college classes during the normal K-12 school day. However, consistent with state policy to allow individual colleges some flexibility, there is no uniform policy governing costs. Higher education institutions are encouraged to offer DE at no charge to students, but some choose to charge tuition. The AP picture is similarly variable: the Early College Scholars program pays tuition and exam fees for eligible students, but other students may have to pay. Televised AP courses are free to all students, but an exam fee is charged. Some colleges offer subsidies for AP courses and exams, and the state's Department of Education offers financial assistance to some students.

B. Maryland's Optional Dual Enrollment Policy Is Boosted by 2007 Legislative Action.

Although Karp, Bailey, Hughes, & Fermin (2005) report that Maryland is one of 40 states with dual enrollment policies, to date Maryland has neither regulated or funded these options. Public school systems and colleges have been free to develop partnerships and early access options as they see fit. Participation has been optional, with tuition policies and admission requirements left to the discretion of the partners. Community colleges may waive 50 percent of student tuition, but unfortunately they cannot offer courses tuition-free. To provide low-income high school students equal access to these opportunities, some colleges offer need-based scholarships through their foundations to cover the remaining 50 percent. Previously, no explicit statewide policies supported or regulated these programs. This scenario will change, however, thanks to dual enrollment legislation enacted in the 2007 session of the General Assembly.

Initial Recommendations of Maryland's Dual Enrollment Committee

In 2005, the PreK-16 Leadership Council, co-chaired by Maryland's Superintendent of Schools, the USM Chancellor, and the Secretary of MHEC, commissioned an analysis of best dual enrollment practices from other states. The PreK-16 Dual Enrollment Committee, a working group of secondary and post-secondary leaders, was convened to investigate potential structures, financial implications, and feasibility of an early college access model that would offer options without placing undue financial burdens on the state, institutions, systems, or students.

The proposed initiative is designed to "increase the number of high school students who enter higher education in Maryland with dual enrollment credits as a way to improve their retention in college and to advance their time to degree or certificate completion."[22] Influenced by Virginia's CCCC, the Dual Enrollment Committee submitted the following preliminary recommendations to the Leadership Council in late 2006:[23]

- Program: Define a set of college-credit-bearing courses as initial options (core options) for dual enrollment models in Maryland.
- Funding: Establish state appropriations to provide adequate financial resources for supporting dual enrollment opportunities in Maryland that ensure that neither PreK-12 nor higher education funding will be negatively affected.
- Policy alignment: Identify regulatory barriers that interfere with dual enrollment. Plan implementation strategies to include development of an MOU signed by state and local officials, analysis of related state and local regulations, and proposed COMAR revisions.
- Public outreach: Develop an intensive information program to inform students and parents about the academic work that is required to prepare for college, get admitted to college, gain financial aid, and graduate with a degree prepared to pursue a career.
- Evaluation: Collect data to document trends in the dual enrollment participation of high school students.

The Leadership Council's original goal was to submit legislation to the 2007 session of the Maryland General Assembly, requesting FY 2008 funding for the statewide initiative. However, that plan was purportedly postponed to give the Dual Enrollment Committee time to develop recommendations for making the high school curriculum more rigorous to support the goals of the American Diploma Project and the Maryland Scholars.[24]

C. Maryland's New Legislation Promises Incentives to Fund Early College Access Initiatives

Traditionally, statewide funding for early college access programs has been limited. Under current regulations, school systems are not held financially harmless for DE participants; high schools may lose their full per pupil rate for students who split their school day between high school and college. Maryland offers only limited resources for students. The Maryland State Department of Education (MSDE) has a small fund that can provide financial assistance to secondary students attending DE courses. In partnership with The College Board, MSDE also awards a limited number of AP Incentive Grants to low-income students who cannot afford the AP exam fee.

Despite the PreK-16 Leadership Council's decision not to submit a budget request to the Maryland General Assembly for FY 2008 funding of a statewide dual enrollment initiative, some local leaders were unwilling to wait. Therefore, elected officials introduced legislation (House Bill 538 and Senate Bill 525)[25] requiring that funds be designated in the state budget for administration of a grant program for dually enrolled students. These bills passed in the 2007 legislative session and will provide funding for high school students who are enrolled in college coursework. The bills authorize distribution of specified carryover funding from the previous year to higher education institutions to cover tuition for dually enrolled students. MHEC has been charged with developing and administering the dual enrollment program, with final recommendations from the PreK-16 Leadership Council due by November 2007. The new law will not fund the administration, regulations, outreach, and evaluation proposed for the statewide initiative, but it may help dual enrollment gain a bigger foothold in Maryland.

VI. Putting It together: What Makes Early college Access Models Work

A comparison of these early college programs and features provides a range of options for Baltimore City to consider (Appendix II).

A. Statewide Models

Florida and Washington State offer two of the most comprehensive programs in the nation and illustrate some of the options Maryland education leaders should explore as they develop an effective statewide strategy to support early college access.

1. Florida has a lengthy history of supporting dual enrollment and related programs. Despite a low high school graduation rate, Florida ranks at the top in the percentage of first-year students in community colleges who return for their second year. Compared to other states, a very high proportion of all enrolled students complete certificates or degrees.

Many courses provided through community colleges offer dual high school credit and college credit; most are taught by high school teachers in the high school classroom. However, students may also enroll in regular college courses delivered on college campuses. Students must satisfy statewide admissions requirements, which limits access to higher-achieving students. No support services are offered.

- *Population served:* More than 35,000 students participated in 2003-2004. Seventy-four percent were White, 10 percent Hispanic, 9 percent Black, 3.5 percent Asian, and 3.5 percent not reported.
- *Admissions requirements:* Students must meet statewide eligibility requirements with a 3.0 GPA and/or a 440 Verbal and 440 Math SAT, or a specified score on Florida's college academic skills placement test. Some individual institutions have additional requirements.
- *Cost to qualified students:* None. Institutions and state bear all expenses, including books, materials and fees.
- *Program components:* Qualified students may enroll in college-level courses before, during, or after school and in the summer. They may enroll at a college campus, attending with matriculated college students, or in one of the college courses taught in a high school.
- *Support services and other features:* No support services are offered as part of this program.
- *Outcomes research:* Florida provides substantial funding for longitudinal studies of learning outcomes, so its programmatic decisions can be based on research.
  - — Comparisons of DE students and similar students without prior credit showed that DE students graduated from community colleges at higher rates and in

shorter periods of time. For the period 1994-1998, DE student graduation rates ranged from 62-72 percent, compared to 53-56 percent for students who did not earn credit in high school.[26] On average, students earned similar grades in courses taught by high school teachers and those taught by college faculty.

— Students who took a combination of AP and DE courses had the highest first-year college retention rates - 84.5 percent.

2. Washington State offers high school students multiple options for college-level learning. The primary vehicle is Running Start, which allows 11th and 12th graders to enroll in courses at 39 two- and four-year higher education institutions. It was created as an alternative for students who have become disengaged from high school and who could benefit from a jumpstart on college, but now enrolls more than 16,000 students in college courses each year. Other learning options include AP courses, Tech Prep, and College in High School, a program in which qualified high variety of acceleration options has exposed more students to college, as well as the number enrolling in college. Running Start has also reduced the need for remediation after high school graduation.

- *Population served by Running Start:* More than 16,500 students participated during the 2005-2006 school year (10,284 FTE students). Among students who transferred to the University of Washington in fall 2005, 43 percent were students of color and 57 percent were female.
- *Admissions requirements:* Students must meet admissions criteria for the institution to which they are applying.
- *Cost to qualified students:* Tuition and fees are free for high school students for up to 18 credit hours. Students pay for their own books and transportation.
- *Running Start components:* High school students attend regular college courses, building blended high school and college schedules that meet their needs. This flexible option offers firsthand experience with the knowledge, skills, attitudes, and behaviors necessary for college success. The most popular courses are those that offer dual credit for high school English and social studies requirements.
- *Support services and other features:* Online options are available for students who do not live near a college. Even if they attend all of their classes at college, Running Start students may participate in sports, clubs and other extracurricular activities in their home high school. They also have access to college services and activities.
- *Outcomes research:* Annual performance reports are mandated by the Learning by Choice Law. The state's Board for Technical and Community Colleges oversees data collection and analysis. Some of their findings:
  - — In 2003-2004, 71 percent of Running Start students continued their education at the same community college where they took dual credit courses before high school graduation.
  - — Running Start students typically outperform a comparable cohort without

prior college experience. Eighty-six percent of Running Start students earned a C or better, compared to 83 percent of the control group. Students with Running Start credits completed the bachelor's degree with an average of 33 fewer state-financed credits than those who started college with no credits.

3. Illinois: The Illinois Articulation Initiative was established in the early 1990s to identify common curriculum requirements across two- and four-year institutions and facilitate credit transfer. In 1998, a general education core curriculum became effective statewide, ensuring that credits earned would transfer to any participating institution. Today, 48 community colleges, 12 public universities, and 47 private institutions participate.

Using this common core curriculum, Illinois has created an environment that supports innovative ways to meet the needs of local student populations and employers with the following models:[27]

- *Hybrid Dual Credit/AP Model:* Moraine Valley Community College partners with area high schools to ensure that its programs respond to local needs. One innovation is delivery of AP courses as dual credit options. Recognizing that some students may master the course content yet fail the AP test, Moraine Valley allows high school students to enroll in selected AP courses as dual credit courses. If a student passes the course according to college grading standards but does not pass the AP exam, he still may earn transferable college credits for his efforts.

- *Accelerated Tech Prep:* Daley College, one of seven campuses of the City Colleges of Chicago, manages a dual credit Tech Prep program called Project Excel that offers a high school diploma, 12-20 college credits, hands-on work experience, and, in some fields, industry certification. Students enter as a cohort in grade 11 and take classes at both the college and high school. Though Tech Prep programs are often considered less demanding than academic programs, Project Excel's rigor and popularity have translated into more stringent admissions requirements: a 3.0 GPA, passing scores on the placement test, and 90 percent attendance. Strong business partnerships provide financial resources, curriculum guidance, and work-based learning experiences.

- *Testing waived:* Lewis and Clark Community College provides traditional DE/DC options including college courses taught in the high schools, second-semester seniors attending classes on campus, online courses, and career development classes. One unique option allows secondary students to enroll in college-level courses with the approval of their high school teachers and without taking the prerequisite placement testing. However, students must eventually pass the placement test in order to receive college credit for their studies. Lake Land College waives placement testing for all students enrolling in Tech Prep dual credit courses.

B. Regional and District Models

State support, while critical, is not a prerequisite for creating successful college transition programs. Many school systems have worked with higher education partners in the absence of state policy or funding to develop early college access models. Some initiatives target lower-achieving students at risk of dropping out of high school; others provide accelerated learning options for high achievers. Some programs focus on specific careers, but most have broader academic goals. Funding sources vary widely.

Despite these differences, the models presented below share some traits. Most offer small class sizes, sometimes in a small school setting. All serve their students effectively as far as the limited data available reveal. All have been cited as models of quality in multiple research studies or publications. All are tuition-free, although students may be expected to pay for their own fees, books, materials, and transportation.

The models discussed here are not endorsed as the best or ideal models for BCPSS, but as examples of the creative approaches designed by public school systems and higher education institutions collaborating to offer students a variety of college-level learning options. Because there is no national clearinghouse or database on college transition programs, the information and data reported below will vary.

1. Citywide Approach: **College Now, a partnership between the City University of New York (CUNY) and the New York City Department of Education** is designed to ensure that all New York City students are college-ready when they graduate from high school. The program started at Kingsborough Community College more than 20 years ago and expanded CUNY-wide in FY 2000. Today, College Now offers access to some form of credit or non-credit postsecondary education for all NYC high school students. Classes are offered in more than 240 public high schools through partnerships with 17 CUNY undergraduate campuses.

More than 30,000 students participate each year in college-level remedial education in math, reading, or writing; credit-bearing courses that may be applied toward high school and/or college graduation requirements; test preparation workshops for the SAT and Regents exam; and summer bridge programs. These diverse options offer multiple pathways to a higher education experience for students who still have access to the support systems in their high schools. Students may take individual courses, but are encouraged to take a developmental sequence of courses and experiences. By offering all students – not just high achievers – access to some form of postsecondary experience, College Now creates the expectation that all students will consider college or career training as their next step.

The New York City Department of Education mandates some common elements and policies for the College Now initiative. However, the system also offers each CUNY institution the flexibility to work with its high school partner(s) in customizing coursework and services. CUNY invests $11 million in the program each year, and additional financial support comes from the New York City Council. The program pays CUNY for credit courses at three rates: (1) by the hour for classes taught in high schools by high school teachers, (2) by the course for cohorts of College Now students attending classes taught by college faculty on the college campus, or (3) per person for individual students attending classes alongside traditional college. College Now receives no state funding.

- *Population served:* Nearly 31,800 students attended 51,400 College Now courses and activities during the 2003-2004 school year. The program was designed to serve a representative population of city students, particularly those historically underrepresented in higher education, and it is progressing toward that goal. In FY 2004, participants were 23.5 percent Black, 20.9 percent White, 19.6 percent Hispanic, 14.1 percent Asian/Pacific Islander, and 22 percent other or unknown. English was not the native language of 31 percent of participants.
- *Admissions requirements:* All New York City students are encouraged to participate, but some programs and services stipulate specific entrance requirements. For example, students must meet standard admissions requirements to enroll in college credit courses. Lower entry standards apply to students seeking academic remediation.
- *Cost to qualified students:* None.
- *Program features:* Most courses are taught in the high school by high school teachers who have been hired by the college as adjunct faculty. Classes typically are scheduled before or after the regular school day or on Saturdays, although some are integrated into the regular class schedule. Cohorts of students also may attend customized courses taught on CUNY campuses by CUNY faculty. Few individual students attend regular college classes alongside matriculated college students.
- *Special features:* College Now liaisons in each school provide academic advising and support for students, relieving some of the burdens of scheduling and guidance that would otherwise fall to high school counselors. College Now students are issued CUNY ID badges and are able to use the college library and computer labs.
- *Outcomes research:* CUNY funds some research and evaluation, awarding fellowships to some of its doctoral students to work as research assistants in evaluating the program. Among their findings:
  - — In Fall 2002, 28 percent of public school students who were first-time enrollees in CUNY had College Now experience. By Fall 2003, that number had increased to 38 percent.
  - — Retention rates (defined as re-enrollment for a third semester) for College

Now students attending community colleges were 76.4 percent, compared to 66.5 percent for other students. Similarly, retention rates at CUNY's comprehensive colleges (which award both associate's and bachelor's degrees) were 78.7 percent for College Now and 70.4 percent for others. At CUNY's senior (four-year) colleges, retention rates were 87.9 percent for College Now students and 81.8 percent for others

2. Hybrid Dual Credit/Tech Prep Model: One Iowa community college[28] offers the Health Careers Academy, a hybrid program that blends the Tech Prep approach with off-site dual credit coursework. Students may simultaneously earn high school and college credit, as well as industry certification required for employment. This is one of 11 technically oriented programs managed by the college.

The health careers DC program serves students from many small high schools in a seven-county area of Iowa. Students attend secondary-level classes at their home schools in the morning and college-level DC classes for 90 minutes in the afternoon. They must also complete clinical rotations required by their field of study. Classes meet at the college and clinical practice occurs at the local medical center. Students may earn 10.5 college credits by taking seven courses: Professionals in Health, Health Skills 1, Health Skills 2, Basic Medical Terminology, First Aid Concepts, CPR for the Health Care Provider, and Nurse Aid. Graduates may sit for the national licensing examination to become Certified Nursing Assistants and enter the workforce, or continue study toward a more advanced credential.

- *Population served:* The area is predominantly white. Eighteen percent of students are eligible for free or reduced-price lunches.
- *Admissions requirements:* The partners wanted to make the Academy available to all students interested in health careers. Therefore, they decided to forgo minimum GPA or standardized test scores and to promote the program as open-access. In reality, however, counselors and teachers informally discourage students who appear to lack the maturity to succeed. Candidates must demonstrate their academic ability to manage rigorous studies by passing college-level courses in biology and health/wellness before they may begin the program.
- *Cost to qualified students:* Tuition, fees, and books are paid for by the high school through an agreement with the community college. Students must return textbooks at the end of the semester or pay for the books themselves. They must purchase their own hospital scrubs.
- *Program features:* A unique feature is the construction of the curriculum. Rather than teaching seven discrete courses, the college faculty created a seamless curriculum that covers multiple courses simultaneously. One day, students may spend 15 minutes studying medical terminology, 45 minutes learning about health professions, and another 30 minutes practicing first aid skills. The following day, students may study medical terminology for 60 minutes and

practice CPR for 30 minutes. "This structure allows both instructors and students to make connections across the subjects, to spend more time on subjects that are difficult, and to eliminate redundancies among the courses."[29] Although the Academy's structure and schedule are different from the curriculum taught at the college, the content, learning outcomes, and expectations are identical.

- *Special features:*
  - — Academic support: High schools are required by law to provide tutoring and other assistance. Students also have access to academic supports provided by the college. Small class size facilitates individual attention.
  - — Career awareness: Students learn about a broad range of health careers, not just nursing, and are offered job-shadowing experiences.
  - — Career preparation: The Professionals in Health curriculum teaches workplace skills such as personal responsibility. The clinical experiences require students to practice and demonstrate those workplace skills. Students may obtain career-related services such as resume writing and job search assistance at both the high school and college.
  - — College transition: Participants are issued a college ID and have access to the college library, athletics and events.
- *Outcomes research:* Researchers tracked students from only one high school. The study cohort was extremely small (3 students), and no long-term follow-up was cited.

3. Alternative for high-achievers: **The College Academy at Broward Community College** (BCC) in south Florida represents a joint venture between the college and the Broward County School Board to offer a high school alternative to high-achieving students. The primary goal is to graduate students with a high school diploma as they concurrently work toward an associate's degree. Students attend both BCC and College Academy classes, with most courses offering dual credit. Students can take 12 to18 credits in the fall and winter terms and 6 more in the second summer session. Both BCC and the public school system contribute funding or in-kind donations and services to the program.

- *Population served:* In 2002-2003, College Academy served 287 juniors and seniors from Broward County. The student body was 50 percent White, 22 percent Black, 22 percent Hispanic, 4.1 percent Asian, and 1.9 percent other.
- *Admissions requirements:* Students are selected based upon their academic ability and perceived ability to handle the greater freedom and increased need for personal time management in a college environment. Students must maintain a 2.5 GPA to remain in the program.
- *Cost to qualified students:* Tuition and fees are waived. Students are responsible for their own books and transportation.
- *Program components:* College Academy students attend regular BCC classes alongside matriculated college students in the morning, and classes at their high

schools in the afternoon, with all courses offered on the BCC campus. All BCC classes and most College Academy classes offer dual credit.
- *Special features:* College Academy faculty are available in the mornings to provide extra help or advising.
- *Outcomes research:* All students in the first class graduated from high school, and 95.5 percent also received an associate's degree from BCC. Nearly all students (98.6 percent) were accepted by colleges and universities to pursue a baccalaureate degree. Most students (90.1 percent) earned scholarships to fund their continuing education.

4. Alternative for lower achievers I: **The Middle College High School (MCHS) of LaGuardia Community College** was founded in 1974 as one of New York City's first alternative high schools. It offers a more collegial and independent atmosphere than typical high schools, treating students as adults and allowing them to blend into the college environment. (Hats, chewing gum, and leaving campus for lunch are all permitted.) MCHS switched to a five-year, early college model as of 2005-2006. Students now take classes for both high school and college credit. After four years, they can earn a high school diploma and at least 12 college credits. If they stay for a fifth year, they also can earn an associate's degree.

- *Population served:* The program serves more than 490 students each year. The student population is 25 percent White, 18 percent Black, 51 percent, Hispanic and 5 percent Asian.
- *Admissions requirements:* It is designed for students with low GPAs and test scores who are floundering in a traditional high school setting. However, higher-achieving students also apply.
- *Cost to qualified students:* None.
- *Program components:* Most classes are taught in seminar format, with lengthy class discussions and independent projects. There are no failing grades; if a student does not pass a class, he/she must repeat it, but a failing grade will not appear on the transcript.
- *Special features:* To avoid the stigma of non-promotion, the program is divided into lower (typically first and second years) and upper divisions (third through fifth years) rather than grades. This allows teachers to maintain high standards. Smaller class sizes permit individual attention, and support services include counseling and career guidance.
- *Outcomes research:* The school has a four-year graduation rate of 58.3 percent for its students who probably would have dropped out of a traditional high school program. Average daily attendance is 91 percent.

5. Alternative for lower achievers II: **Academy of the Canyons (AOC)** is housed at the College of the Canyons in Santa Clarita, California. Its program design was guided by lessons learned from LaGuardia Community College and builds upon

California's success in serving low-achieving, disengaged high school students. AOC serves juniors and seniors who have at least average academic ability, are independent, and show the ability and desire to work hard. They participate in both high school and college courses, receiving dual credit for the college coursework. Small class sizes allow for individual attention. Interdisciplinary instruction guides students in developing critical thinking skills and prepares them for college-level work.

- *Population served:* The AOC population is 75 percent White, 9 percent Hispanic, 7 percent Pacific Islander, 6 percent African American, and 3 percent Asian. The typical student shows a disparity between grades and standardized test scores, is socially adjusted but disconnected from the school environment, and is creative, artistic, and/or individualistic.
- *Admissions requirements:* The selection process includes college placement tests, teacher recommendations, and student and parent interviews.
- *Cost to qualified students:* No cost to students. AOC receives the same average daily attendance (ADA) funding from the local school district as other high schools.
- *Program components:* Students must enroll in a pass/fail course called Advisement, in which they must meet weekly with an advisor and spend at least five hours using support services and research facilities. In their first semester, AOC students take Personal Development 101/Counseling 111, which covers career exploration, study skills, time management, and post-secondary options. They must enroll in a full course load, defined as four high school courses and college units equivalent to two courses.
- *Special features:* A recognition program rewards students for reaching academic goals and engaging in community service. Students have access to college resources such as libraries, computer services, counseling, and the career center.
- *Outcomes research:* Since the AOC was created in 2000, its graduates have done progressively better on standardized tests, completed more college-level classes, and decreased their need for remedial classes.
  - — For the Fall 2004 semester, AOC students had a 76 percent success rate (grade C or better) in college-level classes, compared to 64 percent of all College of the Canyons students and 68 percent of other concurrently enrolled high school students.
  - — Also in Fall 2004, 76 percent of AOC students complete four or more college credits.
  - — Fall 2004 enrollment reflected a 107 percent increase from Fall 2003.
  - — Of the 2004 AOC graduates, 84 percent enrolled in postsecondary education. Of those, 57 percent continued at College of the Canyons.

C. Maryland's Models of Innovation in Early College Access

Although state education leaders and elected officials have been slow to develop policies, procedures, and funding practices to encourage early college access programs, Maryland's community colleges have embraced the concept and created their own initiatives funded by local public or external resources. As on the national level, some focus on academically prepared students who have the greatest potential for success, while other programs have implemented strategies designed to increase access for a broader high school audience.

1. Maryland Offerings for High Academic Achievers

The majority of Maryland's community colleges offer dual enrollment and Tech Prep in partnership with their local school systems. Most permit early enrollment, often at reduced tuition rates, for high school students who meet the college's admissions standards and pass placement tests. Special initiatives may target students who meet more stringent criteria. For example, the early admission programs at Anne Arundel and Carroll community colleges enroll secondary students full-time during their senior years, while the Gifted and Talented programs at Prince George's, Frederick, Garrett, and other counties enroll academically advanced students under the age of 16. A few snapshots illustrate the range of opportunities available:

a. Wor-Wic Community College serves residents of the lower Eastern Shore counties of Worcester, Wicomico, and Somerset through a traditional dual enrollment program. On-campus DE is available to public school students from all three counties and some private schools. Articulation agreements between the college and local boards of education also allow students to earn college credit for select high school courses. In the fall of 2005, the college and the Worcester County Board of Education created a new DE arrangement through which Wor-Wic faculty teach statistics and English classes at three area high schools. In the 2006-07 school year, 138 students from the three counties enrolled in college courses.

High school students must be 16 years of age or older, have at least a 2.5 GPA, and pass the college's assessment tests in order to participate. Eligible public high school students from the three partner counties receive 25 percent off the regular tuition rate for college courses taken while they are still in high school.

b. Hagerstown Community College (HCC) offers Early Support for Students to Enter College Education, or ESSENCE. The program gives high academic achievers an opportunity to earn up to twelve college credits while still in high school. Washington County residents who are at least 16 years of age and enrolled in the public school system, selected private schools, or who are home-schooled may apply. Qualified

students receive a 50 percent reduction in the in-county tuition rate but must pay for books and fees. Income-eligible students may apply for need-based scholarship support provided by the college foundation. Approximately 700 students participate each year.

Two program options are offered. Dual enrollment allows county students to take regular college courses through HCC. The courses do not satisfy high school graduation requirements, but credits earned may be applied toward a certificate or degree at HCC. To enroll, students must pass all Maryland High School Assessments in the core and specialized subject areas related to the area of study, and have the signed permission of a parent or guardian. Through Dual credit, students may enroll in articulated courses, typically taught in the high schools, and simultaneously earn both high school and college credits. Applicants must have a minimum GPA of 2.5 and/or passing scores in reading, writing and math on the college entrance exam; a minimum GPA of 2.75 in core and specialized courses; and the permission of their high school. Articulation agreements forged by the institutional partners specify which courses are eligible for dual credit.

c. Community College of Baltimore County (CCBC) offers the Parallel Enrollment Program (PEP), a traditional DE initiative that targets academically advanced juniors and seniors living in the county. The program served over 1,000 students in 2004. Private, public, and home-schooled students pay 50 percent the regular tuition rate, applicable fees, and required course materials and books. PEP students also have access to the college's library, computer labs, tutoring, and campus activities. Applicants must meet all CCBC admissions requirements, pass the ACCUPLACER college placement exam, submit a transcript, and obtain written permission from their high school. Baltimore County Public Schools students may be released from their classes to enroll, and may earn as many as 12 college credits.

Preliminary data indicate that more than 50 percent of high school students who participate in PEP subsequently enrolled at CCBC after high school graduation. These students experience greater academic success than CCBC students overall.

Academic Success of PEP students enrolled at CCBC — Spring/Fall 2004

	Fall 2004			Spring 2004		
	Headcount	**GPA**	**Success Rate***	**Headcount**	**GPA**	**Success Rate**
Baltimore County Public School PEP students	631	3.10	81%	402	2.83	84%
All CCBC students			74%			75%

**Defined as a passing grade, i.e. A, B, C, D, P (Pass) or S (satisfactory).*

d. Montgomery College and the Montgomery County Public Schools (MCPS) collaborate on more than 30 joint projects including PSAT and assessment testing, curriculum alignment, early placement, summer programs, school-based intervention, professional development, and parent outreach and information meetings. One of these projects is the College Institute.

The College Institute focuses on the specific academic needs of high-achieving seniors attending selected high schools. Participants have an opportunity to earn college credits in college courses taught in their high schools during the regular school day. The Montgomery College courses enhance and supplement AP classes also offered in the schools. Students may earn up to 30 college credits, all of which can be applied toward a degree at Montgomery College. The program provides individual counseling and guidance and encourages an early focus on career decision-making.

2. Maryland Models for Lower-Achieving Students

Maryland is home to two nationally recognized college access models serving students not typically considered "college bound." **CCBC's College Readiness Program** encourages lower-achieving students to consider college and prepares them for more rigorous academic study. This program is becoming a national model. It is one of six highlighted in Revealing Best Practices, a publication of the College Board and has received a National Exemplary Practice Award from the National Council for Student Development. **Montgomery College's Gateway to College program** serves at-risk youth who have stopped attending school. Students participating in this initiative have an opportunity to accumulate high school and college credits simultaneously and to earn a high school diploma while progressing toward an associate degree or certificate. The program model was developed by Portland Community College (PCC), a national intermediary of the Bill & Melinda Gates Foundation and its partners, the Carnegie Corporation of New York, The Ford Foundation, and the W.K. Kellogg Foundation. In turn, Portland Community College selected Montgomery College as one of the first two community colleges nationwide to replicate its model.

A primary goal of both programs is to reduce or eliminate the need for college academic remediation-based on research showing that students who require fewer remedial courses when they enter college are more likely to earn a baccalaureate degree.[30] Early assessment, curriculum alignment, and college-level remediation in high school are strategies that could significantly improve postsecondary retention rates. Funding support for data analysis and long-term follow-up to measure student outcomes in these two programs would be invaluable in demonstrating whether they succeeded in improving college enrollment, retention, and graduation rates.

a. The College Readiness Program targets three student populations: the "ones in the middle" who are on track for college but need continued support; the "late bloomers" who decide in their senior year to pursue college; and students who lag behind in basic skill development but have potential to improve. Many are underserved minorities; many are in the first generation of their families to attend college. Participants are selected by teachers and counselors.

The first step is early assessment. CCBC administers ACCUPLACER to sophomores and juniors in all of Baltimore County's public high schools. Based on their scores, students are assigned to one of three cohorts: the "College Ready," who are encouraged to enroll in AP courses, honors courses, or PEP; those "On Track" who should enroll in rigorous high school courses and/or PEP; and those who should "See Counselor." During the 2004-2005 school year, CCBC provided information and/or pre-college services to 1,749 BCPS students. Seventy-three percent of students who took ACCUPLACER scored "College Ready" or "On Track" in English, 53.5 percent in reading, and 27.4 percent in math.

Students who fall into the "See Counselor" category develop tailored academic and personal enrichment plans with guidance from their counselors. Intervention strategies designed to help them realize their plans include in-school academic advising by CCBC counselors, enrollment in CCBC remedial education courses, PEP, in-school enrichment, and Pre-College Institutes, which are intensive learning opportunities designed to build cognitive and non-cognitive skills. In-school enrichment activities may include basic skills development, mentoring, college-sponsored assemblies, and visits to CCBC. In the future, the partners plan to institute summer bridge programs and to expand parent outreach.

ACCUPLACER test results provided useful information, but BCPS did not have specific intervention strategies to help lower-performing students close the achievement gap. Therefore, College Readiness courses were designed as the linchpin of a seamless system of assessment and remediation to prepare high school students for college-level study. Working together, the school system and CCBC faculty created a prototype "College Readiness: Writing" course that aligns the high school curriculum and college curricula. The faculty work group that designed this prototype course also designed lesson plans and activities that enrich the 12th grade English course.

"College Readiness: Writing" is fully aligned with the English/writing goals and objectives defined by MSDE, BCPS and CCBC. The course is taught during the school day by high school teachers, is free to students, and carries a 0.5 high school elective credit. Students who successfully complete that course are exempted from further assessment and are able to enroll in CCBC's English 101 without further remediation. Although students do not earn college credits for the College Readiness course, they

will graduate from high school ready to enroll in credit-bearing courses at CCBC, rather than having to spend valuable time and tuition in remedial education. Another faculty work group developed a "College Readiness: Math" course, which is being tested this year, and a "College Readiness: Reading" course is under development.

To support this effort, CCBC and BCPS provide extensive faculty development including summer curriculum workshops, information meetings for school personnel, and a College Readiness Handbook for counselors. CCBC also administered the ACCUPLACER to county high school teachers and counselors to help them understand what the test demands from students. A second strategy is the intentional use of the college campuses to familiarize students with higher education, motivate them to strengthen their skills, and raise their aspirations for the future. CCBC officials interviewed for this report say they believe the campus connection builds confidence and helps students envision themselves as college students.

b. The Gateway to College program at Montgomery College serves at-risk youth who have dropped out or are on the road to dropping out. To be eligible, current or former MCPS students must be 16 to 20 years old, county residents, and behind in high school credits for their age and grade. Many participants also have a history of absenteeism and low GPA. They must read at the eighth grade reading level or higher, be proficient in English, and have other academic skills that will help them transition to college classes after the first term. Students may remain in the program until they complete their high school diploma or reach the age of 21, whichever comes first. They must make a commitment of at least two years to work hard to complete their high school diploma and progress toward a college degree. They are dually enrolled in Montgomery College and the public school system throughout the program.

In their first term, cohorts of 20-25 students study together in a Learning Community. This format offers participants a structured opportunity to build academic, personal, and social skills appropriate to a college learning environment. In addition to math, reading, and writing courses, Gateway students must take a career development class to help them focus their academic goals, and a college survival/success class to learn how to take notes, study for tests, and juggle school, work, and family life. One hundred percent attendance is expected. All classes are held on the Montgomery College campuses.

Near the end of the first term, the college placement test is administered to determine the college-level English, reading and mathematics courses appropriate to each student's skill levels. Those who successfully complete the first term are transitioned into the general college population, taking courses that fulfill high school graduation requirements and also earn college credit. A resource specialist assists them in selecting courses relevant to their goals. During the second term, the Learning Community students take an additional college preparation class.

Gateway to College helps students learn how to succeed in an educational setting, under the guidance of instructors and student support specialists who are experienced with and committed to at-risk youth. New students are immediately assigned a resource specialist who provides support and access to resources such as transcript reviews, academic advising, enrollment and registration assistance, and information and referral for wraparound services. The specialist may also provide personal counseling and guidance, assistance with problem solving, time management and stress management to help them stay in school and be successful.

3. How Maryland jurisdictions have tackled the funding challenge of early college access

- *Baltimore County:* CCBC self-funded startup costs for the College Readiness program. Baltimore County Public Schools now assumes financial responsibility for ACCUPLACER assessment and transportation to college campuses for student orientation and testing; CCBC staffs the assessment process and supplies lunches for high school visitors. The partners absorbed faculty costs for curriculum alignment, development of the new bridge courses, and professional development. The school system will pay the salaries for faculty who teach the College Readiness courses in English, reading and math during the regular school day.

- *Montgomery County*: Ten years ago, the County Council budgeted $2 million for staff, curriculum development, and other costs associated with strengthening and expanding collaboration between Montgomery College and Montgomery County Public Schools. Today, a variety of funding mechanisms support early college access. Students pay tuition for classes offered through the College Institute, although the college is seeking state funds so more low-income, high-achieving students can participate. Gateway to College operates as a scholarship program; college tuition and books are provided free of charge, but students must pay an application fee of $25. The partners fund the operating costs; the school system pays Montgomery College per pupil at the approved county rate, and the college receives no FTE funding from the state. Despite its affiliation with the Gates Foundation Early College High School Initiative, Montgomery College receives technical support, but no financial assistance from the initiative.

- *Washington County*: Hagerstown Community College absorbs the cost of 50 percent of the tuition reimbursement in its own budget.

VII. Best Practices In Early College Access: Program Development And Administration

A successful college transition program requires more than just the right mix of coursework and support services, the best faculty, or sufficient financial resources. Effective programs require strong partnerships and negotiated articulation agreements, effective teamwork at all levels, engaged faculty and administrators, access to intellectual and financial resources, data management, and systemwide policies and procedures that facilitate student achievement of both student and program success. An initiative's place within an organizational structure and the authority given to a program manager also can influence its operations and progress.

A. Lessons Learned

Interviews with program managers and other research yielded some common lessons learned and recommended strategies to enhance college transition activities within school districts:

- ***Healthy partnerships:*** The most effective programs operate in the context of a broader secondary-postsecondary collaboration. They have a supportive infrastructure that includes full-time staff, data management, and access to college support services. For example, Lewis and Clark Community College operates five community education centers that nurture relationships with designated high schools. In addition to dual credit, the institutions have collaborated on early academic skills assessment, customized coursework, grant projects, student achievement research, and a new shared facility.

- ***Faculty collaboration:*** Academic collaboration is vital. In Baltimore County, community college and high school faculty teamed up to create College Readiness courses that satisfy the goals and learning objectives of both systems. Department chairs at Moraine Valley Community College must review and approve all curricula taught in the high schools for college credit, certify the teachers, and visit classrooms to evaluate program quality. Lewis and Clark Community College encourages high school faculty to propose new dual-credit courses; if approved, high school teachers develop the curriculum according to college guidelines, and college faculty approve curriculum and monitor teaching.

- ***Dedicated administration:*** Montgomery County hired a full-time Higher Education Partnership (HEP) coordinator in 2000. As the first point of contact for schools interested in developing college partnerships, the coordinator meets with teachers and administrators to discuss their goals and to explain the level of commitment required to achieve those goals. She works with all partners to

formulate mission statements, objectives, plans, and memoranda of understanding. As a result, each HEP is clearly articulated with defined responsibilities, costs, and objectives expressed in a signed agreement. This allows the system to monitor progress toward goals and make the necessary adjustments.

Prince George's County recently conducted a program review that catalogued more than 175 "partnerships" with higher education institutions. Ranging from guest speakers to major initiatives, many activities operate without system oversight or formal MOUs. Some appear to be ad hoc rather than structured and purposeful; many were created in response to external overtures, rather than student-driven. The system concluded that this informal approach does not serve its students well. Therefore, a senior administrator has assumed full-time responsibility for chronicling existing programs, measuring their effectiveness, developing a partnership master plan, and overseeing its implementation.

- ***Dedicated liaisons:*** Most high school counselors, particularly in urban systems, report that they are stretched to the breaking point with managing crises, solving problems, monitoring behavior, and providing guidance. Making these overworked counselors responsible for early college access programs seems destined for failure. To address that issue, CUNY and the New York City Department of Education designated a College Now liaison for each participating New York City high school. The liaison serves as advisor and academic support specialist for students, reducing the burden on high school counselors. Lake Land College in Illinois, selects liaisons from each high school to coordinate dual credit offered at their schools, and pays them a small stipend for this work. An Iowa community college developed a new administrative structure to oversee its DE programs: four college-based administrators serve as liaisons to the high schools, college academic divisions, and employers, and an advisory board provides industry input.

- ***Grounded in curriculum development:*** Montgomery County schools chose to house their higher ed coordinator in the Office of Curriculum and Instructional Programs. This gives the coordinator ready access to curriculum development expertise. For example, if high school and college faculty are trying to create a customized math bridge program, the HEP coordinator can request curriculum assistance directly from her supervisor, rather than having to convince other supervisors of the importance of her request. This clear line of authority can help expedite any activity.

- ***Grounded in student development:*** Other early college access programs have benefited from different locations within their organizations. CCBC's

College Readiness program is led by the Dean of Learning and Student Development and supported by the Senior Director of Developmental Education. Day-to-day operations are managed by staff who report to the Dean. With its emphases on academic assessment, developmental education, and college survival, College Readiness operates effectively within the student services structure of CCBC. The size of the initiative warrants dedicated staffing, but funding for a new position has been unavailable.

- ***Scheduling for success:*** High school course scheduling policies can limit or enhance student participation in early college access initiatives. Most program managers agree that block scheduling, that is, dividing the school day into four blocks of time, rather than seven or more 45-minute sessions,offers optimal flexibility. For example, if core high school courses are scheduled for the morning, then afternoons are free for students to participate in college courses, whether attending in cohorts or as individuals. However, even this approach can present challenges. Because morning classes tend to be more popular among the traditional community college population, afternoon courses are more likely to be cancelled for low enrollment. As a result, high school students may find fewer course options available to them.

B. Successful Strategies For At-Risk Youth

Early college access programs designed to reach out to underachieving students "face a unique tension between providing access for students to experience college-level work and ensuring that students are qualified to succeed at college-level work."[31] The research yields consensus that two factors are critical for achieving that balance for populations typically underrepresented in higher education: rigorous academics and support services.[32]

However, a strong program of academics and support can be derailed by shortcomings in other areas. Many elements are vital to delivering an effective early college access program to students who may not be the "best and brightest," but who have potential for greater educational achievement.

Academics: Nearly half the students who enter higher education and slightly less than two-thirds of the students who attend community colleges must first enroll in remedial non-credit-bearing courses. Another study showed that 40 percent of entering college students had to take at least one remedial course which does not earn credits towards graduation.[33] According to an Abell Foundation report, "95 percent of BCCC's first-time students require remedial education before undertaking a full college-level curriculum."[34] Therefore, programs targeting middle- and lower-achieving students must include academic experiences that can reduce or eliminate

the need for remediation after high school graduation. It is important to avoid offering "more of the same" – the same types of instruction and tutoring that have not succeeded in the past.

Student support services: Among the strategies recommended for lower-achieving students:

- Be explicit about behavioral expectations. Students who do not identify themselves as "college-bound" simply may not know the difference between high school and college.
- Have each student develop an independent learning plan and follow it.
- Teach students the skills and tactics of independent learning.
- Help students acquire study, organization, note-taking, and other vital skills.
- Provide one-on-one attention, particularly during first weeks as students adjust to more rigorous work. Teachers may fill this role, but a full-time counselor is preferred.
- Guide students through the college application/admissions process.

Curriculum alignment: DC and related models require close ongoing collaboration between college and high school content experts to review existing curricula, evaluate their quality, identify similarities and differences, reach consensus on common outcomes, and develop common objectives and lesson plans. Faculty must maintain the integrity and rigor college-level instruction, using college-level texts and grading standards, while adapting it for high school presentation. The DC arrangement may also require approvals from system or state governing bodies. Though time-consuming, this process will ultimately ensure the integrity of the college-level learning experience, facilitate the student's transition to postsecondary education, and simplify the credit transfer process.

Partnership: Successful programs require multifaceted partnerships: between the college and high school, between the higher education administration and the public school system, and between secondary and postsecondary faculty. There must be a formal agreement, signed by all parties, that stipulates goals, actions, outcomes, and finances. There must be shared responsibility and shared credit.

Program structure: Lower-achieving students need a continuum of services, not a single DE or AP course, to achieve success. At-risk students must make a longer-term commitment to give themselves enough time to learn new skills, attitudes, behaviors, and knowledge while they are still in an environment more supportive than the typical college classroom. An education pathway that integrates pre-college, remedial, and college credit courses with "strategies for college success" courses will offer the best opportunity for postsecondary achievement.

Student recruitment: Simply declaring a program "open to all" does not ensure broad access. If programs want to engage more than just the best, brightest, or already college-bound, multiple approaches may be required to recruit a student population as diverse as the high school. Strategies may include formal recruitment as well as word-of-mouth; attention to scheduling, locations, and other factors that can limit access; screening tools other than GPA or SAT scores; and clear definitions of desirable qualities such as "mature" or "motivated." Most importantly, educators must develop a program culture that supports and encourages participation by students from different backgrounds and academic levels.

Faculty: Good teachers are the key to quality. High school and college faculty bring unique strengths to a program, and each will need to develop new skills. Secondary teachers may need to deepen and broaden their content knowledge, and adopt different teaching methodologies. Postsecondary faculty may need to master new pedagogical strategies and student advocacy skills for younger learners. Professional development is essential to maintain expertise. Regular, structured meetings that bring college and high school faculty together can increase collaboration, communication and mutual respect.

Data collection and evaluation: As noted previously, data collection in most college transition programs has been limited and not uniform. Without adequate data, education leaders cannot evaluate program success, identify vital program elements, or correct weaknesses. It is therefore crucial that standards, protocols, and responsibilities for data collection and analysis be identified during program development. Adequate funding for data management is necessary. Lerner and Brand "are pleading for a strong investment in research, evaluation and data collection on [early college access programs] by the federal government, states, colleges and high schools." The American Youth Policy Forum's report, The College Ladder: Linking Secondary and Postsecondary Education for Success for All Students provides one framework for data collection.[35]

VIII. Early College Access In Baltimore City Public Schools

BCPSS has already stated its intent to build on early college access programming:
Like many urban school districts, BCPSS is in the midst of reforms to improve high school student performance, graduation rates, and readiness for college or career. The BCPSS *Blueprint for Baltimore's Neighborhood High Schools* (2001) focused on creating small supportive schools and structures; effective, accountable instruction; and academic rigor. As a result, numerous small schools were created from five large comprehensive high schools, and six innovative high schools were launched.

The BCPSS *Master Plan 2006-2008* outlines priorities and strategies "to ensure that students have the attitudes, skills and proficiencies needed to succeed in college and in the 21st century global workforce." Dual enrollment, AP, Tech Prep, and other early college access initiatives are among the instructional approaches being enhanced and expanded. Goal 5 of the Master Plan proposes the following early college access strategies to ensure that "all students will graduate from high school:"

- Partnerships with institutions of higher education and other organizations will enhance learning options.
- More students will be encouraged to take the SAT.
- Additional sections of AP courses will challenge students to higher performance.
- Career and Technology Education courses will be expanded, reversing an earlier reduction in offerings necessitated by budget constraints.
- Challenging programs and services have been identified for gifted and talented students, including Primary Talent Development, AP, IB, and the Ingenuity Project. The system also will expand the IB program in the primary and middle level years.

A. The Starting Point: Baltimore City's Current High School Performance

There is evidence that outcomes for the city's high school students have improved over the last decade. The high school graduation rate has increased to 60.63 percent, up from 42.58 percent ten years ago. Similarly, the dropout rate has declined from 13.78 percent in 1996 to 10.52 percent in 2006. The pass rate has improved on all four High School Assessments mandated by the Maryland State Department of Education (MSDE). More than 60 percent of BCPSS graduates state that they plan to attend a two-year or four-college, a rate that, though self-reported, is higher than the statewide average.[36]

Despite these substantive gains, BCPSS still has a long way to go to achieve satisfactory performance levels, particularly on measures mandated by state and federal government.

High School Assessments (HSAs): Students graduating from high school in or after 2009 are required to earn a satisfactory score on the HSA in order to earn a Maryland high school diploma. There are four HSAs: English II, algebra/data analysis, government, and biology. Students take each test after they complete the related course. Scores are reported as "advanced," "proficient" or "basic" for individual students, schools, school systems, and the state. HSA scores serve as one indicator of a student's mastery of what is essentially deemed 10th grade academic work. Yet, according to 2006 HSA scores, only 37 percent of BCPSS students taking the HSA passed (earned a score at proficient or above) the English or Algebra I math tests.

Percentage of BCPSS Students Passing Maryland High School Assessments, 2004-2006

Assessment	2006	2005	2004
English 2	37.3 (60.1)*	34.6 (57.3)	Test not available
Biology	47.9 (67.9)	29.3 (57.6)	36.2 (60.9)
Government	53.9 (74.2)	41.7 (66.4)	50.0 (65.9)
Algebra/Data Analysis	36.8 (66.6)	21.8 (53.8)	30.6 (58.8)

Source: Maryland State Department of Education, Report Card, 2006
**Numbers in parentheses are Maryland statewide averages.*

SAT and PSAT: The SAT Reasoning Test, required for admission to most four-year U.S. colleges and universities, now comprises three sections: critical reading, mathematics, and writing. In collaboration with Baltimore's CollegeBound Foundation, BCPSS has dramatically increased the number of students who take the SAT by paying test fees for every 11th grade student to take the test. BCPSS also provides the opportunity for high school sophomores and juniors to take the PSATs at no cost as practice for the SAT.

Number of BCPSS students taking SAT and PSAT

Student Category	2006	2005	2004
12th grade students taking SAT	2,784	2,134	1,807
11th grade students taking PSAT	3,593	3,394	3,511
10th grade students taking PSAT	1,925	2,715	2,130

Source: The College Board, Baltimore City Public Schools District Integrated Summary, 2005-06.

With the increase in SAT test-takers, mean student scores have declined due to the larger pool of middle- and lower-achieving students sitting for the tests.

SAT Scores for BCPSS students

Numbers and Scores	2006	2005	2004
Number of BCPSS test takers	2.784	2,134	1,807
Critical Reading mean score	373 (495)*	389 (505)	391 (N/A)
Mathematics mean score	365 (504)	386 (495)	388 (N/A)
Writing mean score	376 (491)	N/A^	N/A^

**Numbers in parentheses are Maryland statewide mean scores.*
^ The writing exam was first administered in the 2005-2006 school year.
Source: The College Board, Baltimore City Public Schools District Integrated Summary, 2005-06.

B. Status of BCPSS early college access programs

Of the eight different types of early college access programs identified earlier in the report, BCPSS offers five, some to a limited extent. Programs such as AP and Tech Prep are slated for expansion. Other models, such as dual enrollment, have received little attention. All of the models discussed above should be considered as the school system seeks effective ways to keep students engaged in high school and help them prepare for college or a career.

Within BCPSS, the Office of School Counseling is responsible for expanding access to rigorous college-level coursework and providing support services to students. This office has been tasked with working with colleagues to develop plans, memoranda of understanding, operating procedures, and other essential elements of an enhanced early college access initiative. The strategy includes three primary elements: expand AP, redefine the role of the school counselor, and enhance the CollegeBound Foundation partnership.

1. Advanced Placement Programs®

Since 1996, the number of AP exams taken in BCPSS has quintupled to 1,061 exams taken by 749 students (Appendix III). Growth has occurred primarily in the citywide high schools such as Baltimore Polytechnic Institute and City College. Noteworthy among the comprehensive high schools is Patterson High School, which mushroomed from 11 to 87 participants in five years. Patterson partners with CCBC to offer some elements of the community college's successful College Readiness program.

AP offerings in City schools are diverse, ranging from Calculus and Biology to Music Theory and Studio Art. Yet only ten high schools offered AP courses in 2006 (down from 13 in 2004) and, of those, only seven schools had more than two students take an AP exam. On average, U.S. public high schools offer an average of six AP courses per year. Only three BCPSS high schools exceeded that average: Poly offered 13 courses; Western, nine; and City, eight.

As with SAT scores, an increase in AP participation has been accompanied by declining pass rates. Only 29 percent of examinees received a passing score 3 or higher on a scale of 1 to 5 in 2006. Since most USM institutions require an AP grade of 4 or 5, fewer than 29 percent of City participants will find their AP credits accepted by a state four-year institution. Baltimore School for the Arts had the highest pass rate (96 percent), followed by Mergenthaler (83 percent) and Poly (52 percent); all other schools had pass rates below 22 percent. The City's mean AP test score of 2.05 is lower than Maryland's mean (3.06) and the national mean (2.90).

What's planned: BCPSS is part of College Board's African American Student Achievement Initiative, designed to increase the number of African American students participating in selected AP courses and improve achievement on AP exams. The short-term goal is to increase enrollment in three AP courses - English Literature, Biology, and Statistics – in four high schools: W.E.B. DuBois, Digital Harbor, Southside Academy, and Baltimore Polytechnic Institute. The longer-term goal is to offer those same courses at all BCPSS high schools. Supports from The College Board include teacher training through AP Institutes at Goucher College, teacher mentoring, leadership institute for principals, and counselor workshops. The system is also considering introduction of AP prep courses, which have proven effective in other jurisdictions.

2. The International Baccalaureate (IB) Program

In Baltimore, only City College offers the IB Diploma program having received accreditation in 1998 to teach the full two-year curriculum leading to the IB Diploma. City has awarded 57 IB diplomas between 2000 and 2006, with an average of 32 students pursing this rigorous diploma annually. Another 140 City students on average take a lesser number of rigorous IB courses and earn IB certificates each year. Although some City College alumni are displeased with the program, citing its too-small class sizes and cost, BCPSS continues to support this program.

What's planned: BCPSS has begun implementation of the IB Primary Years and Middle Years programs by training teachers at one city elementary school and one city middle school.

3. Tech Prep

The City's once-vital Career and Technology Education program, under which Tech Prep operated, was decimated by federal funding cuts and the 2004 school system financial crisis. Prior to 2002, CTE boasted 280 teachers and a central staff of 12. Three years later, staffing was reduced to 94 CTE teachers and one central office administrator. In the FY 2005 budget, the CTE budget was slashed by 57 percent.

A March 2005 report from The Abell Foundation, *Help Wanted: Career and Technology Education in Baltimore City Public Schools*, examined the need for CTE and Tech Prep, the status of BCPSS efforts, and issues that must be addressed in order to rejuvenate the program. The report recommended a series of actions for BCPSS to consider in order to improve its CTE offerings. BCPSS agreed with the need to revitalize Career and Technology Education and has taken concrete action steps toward that goal including the addition of key "fast track" career programs and the elimination of obsolete programs.

What's planned: As regards Tech Prep, BCPSS and Baltimore City Community College (BCCC) signed a letter of intent in November 2006 to articulate an agreement reconnecting the institutions' dormant Tech Prep programs. The agreement was designed to reinforce existing programs in Construction, Hospitality, Cisco Systems, Allied Health, Law Enforcement, and Emergency Medical Service. At the signing, Dr. Charlene Cooper-Boston, interim CEO of BCPSS, re-affirmed the system's commitment to improving CTE and Tech Prep and to strengthen pipelines from the public schools to the community college.

4. Dual Enrollment (DE)

Most BCPSS students who take college courses do so at BCCC with little formal assistance from BCPSS. Juniors and seniors who are at least 16 years old and City residents may qualify for BCCC's Early Enrollment program through one of four different program options. Under three of the options, an applicant must have a 2.5 or 3.0 grade point average (GPA) and satisfy other admissions requirements. The final option requires only parent/guardian permission and principal/teacher approval.

DE participation varies widely from school to school (Appendix IV). During the Spring 2006 semester, 127 BCPSS students enrolled in 142 college courses, with 64 percent passing with a grade of A, B, or C. Eighteen high schools participated; of those, five enrolled only one or two students. The highest participation rates were at W.E.B. DuBois where 22 students took an environmental science course, and Carver, with 21 students enrolled in 27 different courses. The citywide high schools with the most challenging curricula and highest AP participation – Poly, City, Western, Dunbar, and Baltimore School for the Arts – have relatively few students taking advantage of DE.

Most BCPSS students attend classes at BCCC's Liberty campus on the west side of Baltimore City. The added cost and time required for students to travel from their high school to the campus can have the unintended consequence of restricting access.

For regular DE classes at BCCC , Baltimore City high school students pay half tuition.

5. University-Assisted High Schools

Coppin State University was one of five historically black colleges and universities selected as the first higher education partners in the Gates/Marshall initiative. Coppin Academy high school opened in 2005 on the Coppin campus with a class of 100 ninth graders. An additional class of 100 students is being added each year, and the Academy will eventually serve grades 9-12.

Coppin Academy will convert to a charter school in July 2007. The academic programming meets the requirements of the BCPSS curriculum but is augmented by the faculty and resources of Coppin. For example, university faculty teach sculpture

and other creative arts, and student projects are exhibited in the college galleries. Coppin master teachers provide professional development for the high school instructors, and graduate students in the College of Education gain hands-on experience in the Coppin Academy classrooms.

What's planned: 11th and 12th grade students at Coppin Academy will be offered AP and other early college learning options. All Academy students have access to the university library. Other BCPSS innovative high schools with university assistance, such as Talent Development High School and The Academy for College and Career, have similarly started exploring the expansion of college level coursework and services for their students.

6. Middle College High Schools (MCHS)
The closest approximation to this program model is the Coppin Academy, operated on the campus of Coppin State University and discussed in the previous section on university-assisted high schools.

7. Dual Credit (DC) or Concurrent Credit
BCPSS currently has no programs that allow students to take college level coursework and earn high school and college credit at the same time.

8. Early College High Schools (ECHS)
BCPSS does not currently offer an early college high school program.

C. BCPSS plans to increase support for early college access in its high schools

Redefining the counseling role: The new BCPSS Master Plan envisions school guidance counselors as active participants in the effort to improve student achievement. They are expected to be data-driven and proactive in intervention and prevention, rather than merely responsive to problems and crises. Counselors will be going into the classroom to help students create and fulfill individual learning plans. A new BCPSS course catalog, professional development, and other tools will help counselors guide students and parents toward informed college and career choices. From middle school through high school, the counselors will be responsible for providing information about a student's learning options and for ensuring that all students develop skills they need for academic success.

This plan faces the challenges of a large student/counselor ratio and the many responsibilities that schools traditionally delegate to the school counselor. Implementing this plan will require that counselors' time and supportive resources be protected from lower-priority demands.

Enhancing the work of CollegeBound Foundation: This nonprofit organization provides college access advisors who are charged with improving the college-going rate of BCPSS students. CollegeBound currently has full-time counselors working in 20 City high schools, most of which are not selective admission schools. These specialists provide a wide range of student-centered services including early identification of students with interest in and potential for college; registration and payment for SAT tests; college tours; guidance in developing career plans; college advising; locating scholarships; application assistance; and direct financial aid for "last-gap" funding problems. In fall 2006, CollegeBound also initiated a college retention pilot, working with a group of 50 recent high school graduates who attend one of six public post-secondary institutions in Maryland.

In support of the system's Master Plan, CollegeBound is restructuring its activities in the schools. Counselors are spending less time with 10th graders and focusing efforts on students closer to graduation. They are introducing college success workshops on note-taking skills and test-taking strategies which can reach more students than individual contacts. BCPSS also is interested in extending CollegeBound's services to other high schools although there are no plans or funds for expansion in the 2007-08 school year.

Building the database to track college enrollment, retention and graduation rates for Baltimore City graduates: For years BCPSS has been unable to track the college-going patterns of its graduates. With support from The Abell Foundation and The CollegeBound Foundation, BCPSS has recently contracted with the National Student Clearinghouse to obtain individual students' college enrollment and completion data. Data for every BCPSS graduate since 2000 who attends one of the colleges or universities nationally that subscribe to the Clearinghouse (91 percent of all institutions) will be captured. Initial data analysis is expected to be complete by the end of Summer 2007.

Additional strategies under consideration: The BCPSS Office of School Counseling is considering administering the ACCUPLACER test to all 10th graders. This would facilitate early identification of skill deficits and enable the system to provide academic remediation far earlier, before high school completion. The counseling office also wants to improve access to dual enrollment by offering some DE courses at the high schools, rather than requiring students to travel to college campuses.

D. Lessons Learned in Baltimore City

The citywide academic high schools – Baltimore Polytechnic Institute, City College, Western, Dunbar, and School for the Arts – have traditionally provided some options to earn college credits before graduation, primarily through AP and IB courses. Students at other City high schools have had limited options.

The school system, often in partnership with BCCC, has made varied efforts over the years to provide rigorous, college-level academics for all students. Unfortunately, many past efforts have been short-lived despite good intention; most fell victim to changes in administration, budget shortfalls, lack of administrative support, or changes in priorities.

Planning for any new initiative would benefit from a brief review of prior early college access efforts to identify what went wrong and what must go differently the next time around.

1. Dual Enrollment in the 1990s: Under former President James Tschechtelin, BCCC expanded dual enrollment options in an effort to increase the college-going rate of BCPSS students. The college waived 50 percent of tuition costs and provided scholarships for some low-income students to defray remaining costs. This tuition policy applied to both credit courses and developmental education. BCCC also brought 10th graders to its Liberty campus for ACCUPLACER testing, both to assess basic skills and acquaint them with a college campus. Despite these efforts, BCCC attracted only 50-75 students per semester to early enrollment. In recent years, the dual enrollment focus changed to credit courses and now serves only students who have passed the ACCUPLACER.

> ***Lessons Learned:*** While both BCCC and BCPSS had system-level champions of early college access, they needed champions in each high school to guide the students. Logistics (college vs. high school delivery, student transportation, classroom space, cohorts vs. blended classes) presented many challenges; the most convenient and manageable option is delivering classes in the high schools, but BCCC lacked the money to do that. Course scheduling also restricted access; more college classes were offered in the morning than in the afternoon, but BCPSS students were not released to attend college classes until afternoon, so their course options were limited. Dr. Tschechtelin urged BCCC and BCPSS to engage students in elementary and middle school so they can envision themselves going to college. BCCC initiated Project Success, which brought elementary students to the campus for age-appropriate programs, but it was not sustained.

2. Developmental Dual Enrollment: The PASS Program: In 2001, ACCUPLACER testing of Baltimore City 11th and 12th grade students indicated only a small percentage were qualified to begin college-level courses following graduation. To address this issue, sophomores in three high schools were administered the Placement Articulation Software Services (PASS) test, a companion to ACCUPLACER designed specifically for high school students. Those who tested below the college level were offered the opportunity to enroll in developmental education classes taught at BCCC while they were still in high school. The PASS program was plagued by low attendance, low retention, and high failure rates. However, once BCCC committed to provide instruction in the high schools rather than on their campus, participation improved.

Despite the change in venue, early results were not promising. Over a two-year period, 211 students participated and only 44 completed their remedial courses. The failure rate in math was so high that courses were discontinued pending "corrective measures." The college purchased the math and English units of Academic Systems, an interactive, computer-based learning system, and proposed expansion of the PASS program to 16 comprehensive high schools. However, with the resignation of BCCC President Sylvester McKay, the PASS plan was dropped.

3. Expansion of AP: Growth in AP enrollment since 1996 has occurred almost exclusively in the citywide high schools: City, Poly, Western, and School for the Arts. Access to AP courses continues to elude students at other high schools (with the exception of Patterson). Furthermore, exam scores have declined in the last decade, with only 29 percent of students earning an AP test grade of 3 or above in 2006. As a result, although more students are taking AP courses, more are failing AP exams.

> ***Lessons Learned:*** National research indicates that the AP course experience – not just passing the test or earning college credits – increases the probability of college success. Still, there are a number of obstacles presented by an early college access program that relies primarily on AP courses. It has been difficult to identify a class size of 25 students in each school who qualify to take a specific AP course. Despite AP training provided by the College Board, finding qualified teachers for AP coursework has also been a challenge.
>
> Some jurisdictions have improved outcomes by offering "AP prep" courses before students are allowed to enroll in actual AP courses. BCPSS should pilot AP prep courses in select high schools, and then measure exam outcomes against prior years and against high schools without prep courses. The continuing education divisions of the region's community colleges may have the expertise and faculty to teach those courses, and could provide the

instruction in City schools on a contract basis. This would enable the community colleges to receive FTE reimbursement (assuming students are 16 years and older) and reduce the overall cost to BCPSS.

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4. CollegeBound Foundation: CollegeBound provides college guidance and "last gap" funding to some BCPSS students who lack the knowledge and resources to submit college applications, visit colleges, pay fees, purchase supplies, and pay other expenses on their own. CollegeBound now delivers comprehensive, individualized services in 20 City high schools through a college access advisor assigned to each school. BCPSS has now asked CollegeBound to spend more time getting 11th and 12th grade students better prepared for college-level coursework. Counselors will teach college success workshops in an effort to reach more students in less time. CollegeBound, in concert with the BCPSS school counseling office, has been instrumental in getting more students to take the SAT and in obtaining college enrollment and retention data from the National Student Clearinghouse.

Lessons Learned: The CollegeBound Foundation is a natural and untapped partner in BCPSS' work in early college access. College planning for students has been most effective when CollegeBound Advisors work hand in hand with BCPSS school guidance counselors. At the moment, nearly half of Baltimore's high schools are not yet served by CollegeBound.

5. Access to External Funding Resources: All early college access programs require additional funding beyond the per-pupil or average daily attendance rate. Most programs, particularly those serving lower- and middle-achieving students, need additional faculty to improve student-teacher ratios, full-time student support services, intense remediation, ongoing curriculum and program development, and customized wraparound services. These external resources must come through legislation, grants, foundations, post-secondary partnerships, or in-kind contributions. Typically, money must be drawn from multiple sources to support all the components of comprehensive programming.

Lessons Learned: BCPSS has not always taken advantage of new funding streams that become available to support early college access programs. For example, "Great Expectations" funded AP instruction for low-income students in ten jurisdictions, but BCPSS did not participate. The Tech Prep program was allowed to founder, thus squandering federal funding available for that effort. As of spring 2007, no City legislators had co-sponsored House and Senate bills to create grant funding for students in dual enrollment. Neither BCPSS nor BCCC is represented on the PreK-16 Dual Enrollment Committee that has developed recommendations for new statewide DE policies and funding.

6. Dual Enrollment Universities Beyond BCCC: BCCC cannot and should not be expected to provide every service and every program that the school system needs. BCPSS needs to look beyond the city's community college to other post-secondary institutions with successful programs and funding. The University of Baltimore, for example, is adding its first freshman class in fall 2007 and may be a potential university partner. In addition, the Community College of Baltimore County has three campuses just a few miles from the City line and accessible by public transportation. CCBC could offer additional dual enrollment options, transport its College Readiness Program to nearby high schools, and develop Tech Prep programs not offered at BCCC in areas such as Arts, Media and Communications; Transportation Technologies; and Engineering Technology. CCBC just received a $2.6 million grant from the U.S. Department of Labor to expand the healthcare workforce pipeline, including new Tech Prep focus areas.

A number of administrators at CCBC alluded to a long-time understanding or "gentleman's agreement" among community colleges not to work in another's jurisdiction unless invited to do so by BCPSS or BCCC. Whether or not there is an understanding, it would be useful for BCPSS to explore additional post-secondary partners.

IX. Recommendations

The initial goal of this study was to explore dual enrollment as a strategy for improving high school retention rates and facilitating the transition to college for students not traditionally considered "college bound." It has become clear that many types of early college access programs – AP, IB, Dual Enrollment, Tech Prep, and others – hold promise for different types of students at different stages of their academic, social, and emotional development. A comprehensive approach, rather than a college course here or a remedial class there, will be necessary to improve the college prospect of students beyond the "best and brightest."

Recommendations for new initiatives must be considered within the context of BCPSS's agenda of high school reform; national and state mandates of No Child Left Behind, HSAs, and MSAs; and the daily challenges of educating 83,000 urban students. Successful early college access programs require commitment of administrators and faculty from both secondary and postsecondary partners; many BCPSS principals and teachers may be stretched thin by existing priorities and unwilling or unable to integrate one more worthy concept. Sustainability should also be a consideration; new programs should not be initiated unless there is system and partner commitment to maintain adequate funding and support. Ultimately, successful early college programs benefit from a clear and supportive state policy with earmarked funding.

Nevertheless, the research presented here about program models and analysis of the limited available data suggest the potential rewards of an inclusive approach to early college access programs. The experiences of the Middle College High School of LaGuardia Community College, California's Academy of the Canyons, and Montgomery College's Gateway to College model demonstrate that college-level learning is possible for low achievers, if given appropriate support and guidance. BCPSS should integrate the lessons learned from these and other models to institute a variety of early college access options – not just AP – that offer pathways to higher education for students in every City high school.

Some elements of a comprehensive plan are already in place or in the planning stages in Baltimore City. BCPSS and BCCC just signed an intent agreement to strengthen Tech Prep. The College Board is helping the system expand AP in some high schools. Extension of the IB curricula to the middle and elementary levels is beginning. The CollegeBound Foundation is revising its strategies to focus more attention on juniors and seniors and has assisted BCPSS in contracting with the National Student Clearinghouse to collect college data on city graduates. Coppin Academy and other university-assisted models plan to offer access to college courses for their enrollees. BCPSS's Director of School Counseling is creating a new operating model that directs high school guidance counselors to focus on career and college planning.

While many of these initiatives are referenced under Goal 5 in the BCPSS Master Plan 2006-2008, the current approach is neither strategic nor well integrated. Programmatic responsibility is spread among three or more school system departments with no single vision or plan for early college access programs that serves a wide range of students.

A FRAMEWORK FOR MOVING BEYOND AP EXPANSION

A comprehensive, inclusive plan for early college access programs is rooted in a belief that students can benefit from college-level studies, but not with a one-size-fits-all approach. High achievers may succeed at AP or IB courses alone, but many could benefit from AP prep courses or well designed dual enrollment initiatives. Middle achievers may require early skills assessment, new approaches to academic remediation, college readiness courses, and exposure to college-level learning before they are prepared to tackle postsecondary coursework. Motivated lower-achieving students will need a multi-year, enhanced comprehensive model that may include pre-college, college-prep or college-level coursework combined with career guidance, counseling, remediation, tutoring, small class sizes, and wraparound services to address personal issues that interfere with learning.

School system administrators must build a framework of policies and practices that facilitate multiple early college access options for students of diverse achievement levels. A limited number of high schools with committed principals, staff, administrators, and teachers could serve as pilot sites to test national models locally. Implementation in stages will enable individual schools to learn from one another with a long-term goal of providing access to every student.

In collaboration with higher education partners in the greater Baltimore region, select high schools should be encouraged to customize and codify early college access offerings that support the school's vision and the learning needs of their student populations. Early college initiatives should incorporate instructional methodologies common to college settings, such as interdisciplinary instruction, independent study, seminar/discussion formats, and project-based learning. Courses that teach students how to learn in a college environment – note-taking, test-taking, personal responsibility, time management – will be fundamental to success.

Finally, follow-up is vital. Nationally, the absence of long-term outcomes data has made independent evaluation of early college access models nearly impossible. Using data from the National Student Clearinghouse and other sources, BCPSS could set the standard for measuring the effectiveness of the different program models it adopts.

A. Recommended Steps for Maryland

1. ***Take action now to implement statewide policies that support early college access.***
While other states have been proactive in developing their dual enrollment policies, Maryland's education leaders have been sitting on the sidelines. This inactivity has resulted in limited learning options for many students, particularly those in less wealthy school systems that cannot afford a reduction in state financial support based on FTE. Some jurisdictions have negotiated their own agreements with local colleges, but the resulting programs provide uneven access to services and may not guarantee transfer of credits from one institution to another. It is time for state leaders to take the initiative.

   Over the past year, the PreK-16 Dual Enrollment Committee, composed of 36 professionals representing local school systems, colleges, universities, education organizations, and government agencies, met to research DE strategies used by other states, identify local needs, and develop policy and funding recommendations. A thoughtful, realistic framework was completed by November 9, 2006. A consultant was to have developed a funding model to be presented to the Maryland General Assembly and included in the FY 2008 state budget. Once funding was secured, a detailed implementation plan would be developed.

   Unfortunately, the financing model was never completed and FY 2008 funding has not been requested thus denying equal access to all Maryland students for at least one more year.

   Instead of moving forward on the proposed recommendations, the DE Committee has now been asked to complete an additional task: "present recommendations for the strengthening of the high school curriculum, supporting the goals of the American Diploma Project and the Maryland Scholars." While strengthening the curriculum is a worthy goal, this new assignment should not have derailed the dual enrollment plan.

2. ***Absent FY 2008 budgetary support, initiate planning for FY 2009 implementation of the Dual Enrollment Committee's 2006 proposal.***
It is incumbent upon the PreK-16 Leadership Council to begin phasing in program elements that have limited cost implications and to make definitive plans to secure sustainable funding within the FY 2009 state budget. Each year of delay denies access permanently to one or more grade cohorts who are aging out or dropping out of secondary education.

   The Dual Enrollment Committee's proposal emulates Virginia's Commonwealth College Course Collaborative, a complex, tightly controlled model that requires

statewide coordination of core courses, curriculum alignment, program delivery methodologies, program evaluation, and administrative oversight by multiple government agencies. Such a complicated model cannot be implemented without funding. However, plans can be fully developed and prepared for implementation on July 1, 2008. Assuming the recommendations remain unchanged, the following actions should be completed no later than October 2007:

1. Program
   a. Declare publicly a date by which the statewide DE initiative will be implemented. Help students, parents, and institutions plan accordingly.
   b. Coordinate training for secondary and postsecondary institutions to help them plan for implementation.
   c. Identify core courses to be accepted for college credit by all state-supported colleges and universities.
   d. Develop common curriculum for each core course, aligned with state high school learning outcomes and, where appropriate, placement testing utilized by Maryland colleges.
   e. Encourage school systems and their college partners to begin designing extended DE options beyond the core courses mandated by the state.

2. Funding
   a. Develop funding model.
   b. Present to the Governor and legislative leaders in advance of 2008 General Assembly session.
   c. Include full funding in the FY 2009 budget.
   d. Prepare for statewide DE implementation on July 1, 2008.

3. Policy Alignment
   a. Develop MOU(s) for signature by appropriate state and local officials.
   b. Analyze state and local regulations related to dual enrollment and anticipate challenges.
   c. Secure COMAR revisions to reduce barriers to access.

4. Public Outreach: Plan a promotional campaign directed at students and parents.

5. Evaluation
   a. Collect baseline data on all early college access options now offered by local school systems and college partners.
   b. Develop a data tracking system that is integrated in the reporting requirements for secondary and postsecondary institutions.
   c. Require long-term follow-up of individual students as they transition from high school to college and into a career.

3. ***Consider other more flexible early college access models.*** The PreK-16 Dual Enrollment Committee recommended one of the more structured and controlled dual enrollment models. Other models may be less complicated and less costly to implement. For example, Washington State's Learning by Choice law limits state control over courses and content, yet ensures quality control through ongoing program evaluation. The model is well respected and has been replicated successfully by other states. It would still require legislative action, but not the coordination of curriculum, content, and assessment necessitated by Virginia's Commonwealth College Course Collaborative.

   Given the alphabet soup of initiatives that Maryland's education leaders are already guiding – HSA, MSA, and so on – the PreK-16 Leadership Council may wish to reconsider the need for a grand plan for dual enrollment. The Council, as well as the state institutions and school systems it impacts, may be better served by a more modest approach that would phase in a variety of dual enrollment options over time.

B. Recommended Steps for Baltimore City Public Schools

1. ***Develop a comprehensive plan to increase early college access programming that supersedes current plans focused only on AP and Tech Prep.*** Short-term stopgap measures have limited long-term impact. National models have demonstrated that lower-achieving students require a continuum of services, not just one course to "fix" their math or reading abilities. They need to make a commitment of a year of more. They also need to learn the new attitudes, behaviors, and knowledge necessary for college success while still in the more supportive environment of their high school. A successful program of services must be developed in concert with a committed postsecondary partner and with resources adequate to sustain the effort.

2. ***Expand AP as planned, but enhance student AP success through improved preparation.*** BCPSS has developed a plan to expand delivery of AP courses to every BCPSS high school. The system also plans to require students to take an AP exam if they enroll in the corresponding AP course. Unfortunately, if past trends hold true, expanding access without support systems will lead to lower mean scores. Therefore, BCPSS should amend its AP plan:
   - *Start preparing students for AP exams at an earlier date.* Students should integrate appropriately challenging coursework into their individual program plans, beginning in the 8th grade. By 11th or 12th grade, they should have the foundation skills for better performance on AP.
   - *Pilot AP preparation courses at several high schools.* Compare AP test scores of students attending the prep courses with those of comparable

students not offered that support. Evaluate the effectiveness of the courses in increasing AP success, and expand delivery as appropriate. BCCC or CCBC may be able to deliver the courses the high school campuses through contracts with their continuing education divisions.

- *Introduce other early college access models as viable options to AP.* Some students test poorly. For them, a program that uses a single test score for a final grade is a recipe for failure. A dual enrollment or dual credit option may offer greater opportunities for a successful pre-college learning experience. Other students may pass an AP exam with a grade of 3 or 4, yet a college or university may not award credit for that score. In that situation, a better choice might be enrollment in a DE or DC course that is guaranteed to earn college credit. Another concern is the exam itself: some students master the course content, yet perform poorly on the exam. Moraine Valley Community College in Illinois found a novel solution: it offers dual credit for students who pass an AP course according to college grading standards, even if they fail the national AP exam.

3. Expand dual enrollment options

BCPSS has developed a detailed plan to expand AP but has given relatively little attention to dual enrollment. A comprehensive DE approach that includes remediation could benefit many students unlikely to succeed in AP. Well-designed data collection and program evaluation would contribute to the limited national research base on the effectiveness of dual enrollment initiatives.

Three specific strategies are recommended:

- *BCPSS needs to codify its informal relationship with BCCC through a new MOU.* This process offers the perfect opportunity to negotiate a new agreement that will provide broader learning options for City students and greater access to performance data for program evaluation. The new president of BCCC, Dr. Carolane Williams, has expressed a commitment to work with BCPSS to become "the premier catalyst in providing quality, accessible, and affordable learning experiences." Dr. Williams most recently served as provost of Florida's Broward Community College North Campus, an institution and a state already referenced as leaders in expanding access to higher education. Therefore, she brings to Baltimore relevant experience that should benefit BCPSS in constructing new approaches to dual enrollment.
- *Negotiate MOUs with multiple post-secondary institutions –Community College of Baltimore County (CCBC) and others – to give BCPSS students multiple Dual Enrollment options.* The colleges should be expected to deliver daytime courses at select high schools for cohorts of students. Individual students also should have the option of attending regular college

courses alongside matriculated students. Absent statewide funding of dual enrollment, BCPSS should negotiate reduced tuition costs and solicit foundation support to help more City students enroll in DE.

- *Require that all students participate in a college-readiness course before taking a DE course.* Community colleges could offer the one-credit "College Success Seminar," required for all incoming college students or may be contracted through their continuing education divisions to deliver similar courses onsite.
- *As a condition of the MOU, require that the colleges track outcomes for students who continue their studies after high school graduation.* Long-term follow-up should include information about completion of a certificate or degree at a two-year institution, completion of a baccalaureate degree and, where possible, GPAs at time of graduation.

4. ***Administer the ACCUPLACER to all 10th graders who aspire to attend college and to 12th grade students who are considering two-year colleges. All passing test scores should be accepted by Maryland community colleges.*** The BCPSS Director of School Counseling lists this as a priority, and it is consistent with the plan to redefine the role of school counselors. However, funding it may be a challenge. In partnership with local colleges, BCPSS should pursue external funding sources that would permit ACCUPLACER administration to all 10th graders who declare themselves college-bound. (Currently, 60 percent of BCPSS graduates say they plan to go to college.) Community colleges should officially accept all passing scores on these tests without the need to retake. The test results will determine the level of need for college remedial coursework among high school students and direct early college programs in this area. Additionally, counselors and teachers could use those scores to help students develop individual learning plans that will help them prepare for higher education.

5. ***Ensure that the four initial Tech Prep articulation agreements are signed with BCCC and expand other Tech Prep programs.*** BCPSS and BCCC recently signed an intent to redevelop new Tech Prep agreements to strengthen high school to community college to career transition beginning with programs in Construction, Hospitality, Cisco, Fire Science, CADD, Legal Assistant, and Allied Health. BCPSS should use this as a first step in developing a comprehensive partnership plan with the City's community college. BCPSS also may base new partnership agreements with other higher education institutions on its MOU with BCCC or, at a minimum, create a streamlined process to facilitate such partnerships.

6. ***Replicate CCBC's "College Readiness Model" in four City high schools to serve middle-achieving students.*** The program, already successful in Baltimore County, has been praised as a national model and has real potential to help City students prepare for college. Furthermore, CCBC is already at work with Patterson High School. BCPSS should engage CCBC and BCCC in a partnership to pilot the College Readiness model at a few other City high schools. External funding should be sought for the start-up costs of curriculum development, administration, planning, and technical assistance. Once the programs are operational in these pilot schools and have demonstrated progress, expansion to other schools would be relatively inexpensive. MOUs should codify agreements with all higher education partners.

7. ***Consider a pilot replication of the "Gateway to College" model in one or two City high schools to serve lower-achieving students.*** The Gateway Model, created by Portland Community College, supported by the Bill & Melinda Gates Foundation, and replicated at Montgomery College, has proven successful with students who are at risk of failing or dropping out of school. The approach is consistent with some of the small school models developing in Baltimore City, although the Learning Community concept as practiced through Gateway may be more intense than anything now offered locally. With expertise geographically near, BCPSS should contract with the Montgomery County program director to provide guidance in customizing the program model for BCPSS. It is important to note that Montgomery College and MCPS receive no funding from the Gates Foundation: all expenses are paid through regular operating budgets. BCPSS may need to secure external funding to cover startup costs.

8. ***Create dual credit options that allow students to earn credit toward secondary and postsecondary degrees simultaneously,*** thus saving time and money. However, creating a DC partnership requires more than just opening college enrollment to high school students. The process of aligning high school and college curricula should be rigorous and can be time-consuming. Nevertheless, DC is an important option to allow higher-achieving students to earn both high school and college credits by completing a single course. Maryland models of excellence include Hagerstown Community College and Harford Community College (which uses the term "dual enrollment" for a model that this report calls "dual credit"). BCPSS and its higher education partners should consult with those institutions when they are ready to develop this approach to early college access.

9. ***Develop baseline data for all early college access programs and higher education partnerships beginning with data from the National Student Clearinghouse.*** Until its recent contract with the National Student Clearinghouse, BCPSS was unable to track the post-secondary education trajectories of its graduates. (Similarly, no one maintains a comprehensive listing of high school/higher education partnerships; data on how many BCPSS students participate in dual enrollment courses was hard to find.) AP data from the College Board include the number of students who took exams, but do not account for the students who enrolled in the courses but did not take the exams. CollegeBound can report college completion rates for only some of the students it serves. Without accurate information, BCPSS cannot measure the effectiveness of program and intervention strategies or, more importantly, the progress toward its goal of having every student "college ready."

   As BCPSS and its higher education partners try to expand college transition initiatives, data collection and analysis must be a priority for every articulation agreement and MOU. Students must be identified not only by courses taken and grades received, but also by the support services accessed, whether provided by the high school or the college. National Student Clearinghouse data should become the foundation for building other tracking tools.

10. ***Evaluate higher education partnerships for effectiveness and consistency with BCPSS goals.*** In its survey of postsecondary partnerships, Prince George's County identified 175 separate higher education activities in its public schools, only some of which supported the system's master plan. Montgomery County identified many ad hoc alliances operating without MOUs or documentation of student outcomes. BCPSS should catalog its school-based partnerships, measure their impact on student performance, and either codify or eliminate them based on evidence of effectiveness.

11. ***Expand partnerships to other community colleges.*** Historically, BCCC has been the primary BCPSS partner for community college-level programs and services. It is time to explore partnerships with other post-secondary partners as well. Furthermore, financial shortfalls resulted in limits on BCCC dual enrollments this spring, a necessary decision that nonetheless prevented some BCPSS students from getting a head start on college. The Community College of Baltimore County offers dual enrollment and Tech Prep options not available through BCCC. Its College Readiness Program works for lower- and middle-achieving Baltimore County students and could be replicated in Baltimore City. Many BCPSS students live closer to a CCBC campus than to BCCC, especially

students living in East or West Baltimore. The University of Baltimore is expanding to serve its inaugural class of college freshmen in fall 2007 and may be a potential partner in early college access programs.

The authors of this report could find no legal documents restricting CCBC or other institutions from delivering services to Baltimore City high school students, and therefore believe that BCPSS is free to develop early college access with institutions in other Maryland jurisdictions.

12. ***Develop data collection and management systems to track enrollments and outcomes.*** Data analysis should also extend beyond program models to elements within models. For example, if lower-achieving students are succeeding in an enhanced comprehensive program that includes tutoring, college-based remediation, college-readiness workshops, and wraparound services, the system needs to determine which of these elements were critical factors in improving student performance. BCPSS can then replicate the effective services and scale back spending on elements that had less impact.

13. ***Dedicate at least one full-time BCPSS professional position to oversee higher education partnerships and early college access.*** Partnership programs are too costly and too complicated to be relegated as "other duties as assigned" to the sole central office administrator who also oversees school counseling, service learning, and all college access activities. A new BCPSS position in early college access should be created in the Office of Student Counseling to coordinate all college partnerships, college advising, dual enrollment, and other college access programs in the district. The person in this position should have direct access to decision-makers, school-based leaders, and individuals responsible for data management and/or institutional research. He or she should have the authority to negotiate articulation agreements and MOUs directly with principals and partners. As the programs and enrollments grow, program liaisons should be assigned to each high school with substantial enrollments to ensure effective onsite program delivery.

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Individuals interviewed for this report

Name	Title	Organization/Affiliation
Dr. Anirban Basu	President	Sage Policy Group
Lisa Bishop	Senior Program Officer – High School	The Fund for Educational Excellence
Jennifer Fisher	Director of Admissions, Records and Registration	Hagerstown Community College
Barbara Hopkins		Quick Study Consulting
Andy Hubner	Director of High School Reform	The Fund for Educational Excellence
Dr. Bruce Katz	Regional Executive Director	Prince George's County Public Schools
Bertha Knight	Curriculum Specialist, Gifted and Talented Education Program	BCPSS
Charla Levine	Higher Education Partnership Coordinator	Montgomery County Public Schools
Dr. Cindy Peterka	Dean of Learning and Student Development	CCBC
Dean Richburg	Director of School Counseling	BCPSS
Jimmy Tadlock	Program Director	CollegeBound Foundation
Dr. James Tschechtelin	Former President	Baltimore City Community College
Samuel Walker	Associate Program Director	CollegeBound Foundation
Harriet Zlotowitz	Counselor	CCBC

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[23] *Ibid.*

[24] Maryland has joined other states in a collaboration with the American Diploma Project to raise expectations and achievement in high school. The Maryland Scholars program promotes a rigorous and specific course of study in high school that could lead to the award of Academic Competitiveness or SMART grant for college tuition.

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[26] Lerner & Brand, 2006.

[27] Barnett, Gardner, & Bragg, 2004.

[28] Note: The researchers who reported findings in this section chose to maintain the anonymity of the institutions they studied. As a result, participating organizations are listed generically.

[29] Hughes, Karp, Fermin, & Bailey, 2005.

[30] Martinez & Klopott, 2005.

[31] Lerner & Brand, 2006.

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[34] "Baltimore City Community College at the Crossroads." The Abell Foundation, March 2002.

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[36] 2006 Maryland School Performance Report/Maryland Report Card. Retrieved 5/13/07 from http://mdreportcard.org/StatDisplay.aspx?PV=38|12|30|AAAA|2|N|6|13|1|1|1|1|1|1|3.

Appendix I

State Policies on Dual Enrollment

State	State policy	State oversight	Target population	Admission requirements	Course content	Tuition	Funding
Alabama	Not specified			State: Advanced		Student pays	
Alaska							
Arizona	Mandatory	Quality control		State: Combination	Limits; college approval; standardized	Institution's decision	Double funding
Arkansas	Mandatory			Secondary Discretion		Student pays	
California	Mandatory	Financial reporting	Enrichment	Secondary discretion	College approval	Student pays	Double funding
Colorado	Mandatory		Enrichment			Institution pays	Double funding
Connecticut							
Delaware							
Florida	Mandatory		Enrichment; technical	State: Combination	Limits	Institution pays	
Georgia	Mandatory	Quality control		State: advanced	State approval	State pays	Both lose
Hawaii	Not specified			Higher ed discretion		Student pays	
Idaho	Mandatory			State: Advanced		Institution pays	
Illinois	Not specified		Advanced			State pays	Double funding
Indiana	Mandatory			State: Advanced		State pays	Partial policies
Iowa	Not specified				Limits	Student pays	
Kansas	Voluntary		Enrichment	Higher ed discretion	State approval	Student pays	
Kentucky	Voluntary			Higher ed discretion			
Louisiana							
Maine	Mandatory			State: Combination		State pays	
Maryland	Voluntary			Higher ed discretion		Institution decision	High school loses
Massachusetts	Not specified		Enrichment	State: Combination			
Michigan	Mandatory	Financial reporting		State: Proficient		Institution pays	Both lose
Minnesota	Mandatory				Limits	State pays	Double funding
Mississippi	Voluntary						Partial policies
Missouri	Voluntary	Policy compliance	Advanced	State: Advanced	Standardized; Limits	Institution's decisions	Double funding
Montana	Not specified			Secondary discretion		Institution's decision	
Nebraska							
Nevada	Mandatory	Quality control					
New Hampshire							
New Jersey	Mixed		Enrichment				
New Mexico	Not specified	Quality control		Higher ed discretion		Institution pays	Double funding
New York							
North Carolina	Not specified	Quality control	Enrichment			Institution pays	Both lose
North Dakota	Mixed			Secondary discretion	College approval	Student pays	Partial policies
Ohio	Mandatory			State: Combination		Institution pays	Both lose
Oklahoma	Mandatory			State: Advanced		Student pays	
Oregon	Voluntary	Quality control		Higher ed discretion	State approval		
Pennsylvania							
Rhode Island							
South Carolina							
South Dakota	Mandatory						
Tennessee	Mandatory	Quality control				Student pays	Partial policies
Texas	Voluntary			State: Proficient		Institution's decision	High school loses
Utah	Not specified	Quality control		Joint decision	College approval	State pays	
Virginia	Mandatory	Quality control		State: Advanced	College approval; Limits	Institution's decision	Double funding
Vermont	Voluntary		Technical	Higher ed discretion		Institution pays	
Washington	Mandatory	Quality control		State: Advanced		Institution pays	High school loses
West Virginia	Not specified	Quality control	Advanced	State:Advanced	Limits	Student pays	Partial policies
Wisconsin	Not specified			State: Combination		Institution pays	
Wyoming	Voluntary			Higher ed discretion		Institution's decision	Double funding

Source: Karp, Bailey, Hughes & Fermin, 2005

Legend

State Policy
- Mandatory: High schools must inform students of DE opportunities and accept credit
- Voluntary: High schools and college have the option of participating
- Not specified: State policies do not specify whether DE is mandatory or voluntary
- Mixed: High schools have the option of whether to offer DE, but colleges cannot refuse to participate

State Oversight
- Financial reporting: Requires annual reporting of programs' finances
- Policy compliance: Programs must provide evidence that they are complying with state requirements
- Quality control: Programs must report annually on their course offerings or student outcomes

Target Population
- Advanced: Intended to meet the needs of academically advanced or gifted students
- Enrichment: Intended to provide enrichment for students who have special academic or vocational needs
- Technical: Intended to provide technical education

Admission Requirements: Academics
- State requirements:
  - — Advanced: Students must be academically advanced as evidenced by GPA of 3.0 or above and/or SAT of 1,000 or above
  - — Proficient: Students must be academically proficient as evidenced by GPA of 3.0 or below and/or SAT below 1,000
  - — Combination: Students must meet criteria that vary depending upon the course of study
- Higher ed discretion: Requirement set by postsecondary partner
- Secondary discretion: Requirements set by secondary partner
- Joint decision: Both partners set admission requirements

Course Content
- Limits: State limits the types of courses that may be offered
- College approval: College must approve syllabus, textbook and/or exams
- Standardized: Courses must use a standardized curriculum, books, and/or textbooks
- State approval: State education agency must approve syllabus, textbook and/or exam

Tuition
- Student pays: Student is responsible for tuition
- Institution's decision: College and/or high school decides who is responsible for tuition
- Institution pays: College or high school is responsible for tuition costs
- State pays: State is responsible for tuition costs

Funding
- Double funding: Neither institution loses funds – both are funded at full rates
- High school loses: High school does not receive full ADA funding for DE students
- College loses: Colleges do not receive FTE funding for DE students
- Both lose: Both colleges and high schools lose some, but not all, of their FTE/ADA funding for DE students
- Partial policies: Precise funding is not specified, but it is clear that at least one institution's FTE or ADA funding is affected

Appendix II

Early College Access Program Comparison

Program; Location	Type	Target Audience	Admission Requirements	Cost to Students	Primary Location	Primary Faculty	Schedule	Format	Credits Earned
Academy of the Canyons; College of the Canyons, CA	Enhanced comprehensive	Low, at-risk	Joint decision	None	College	Dedicated	School day	Both	Both
College Academy; Broward CC, Florida	Comprehensive	Advanced	Joint decision	Books	College	Both	School day	Both	Both
The College Institute, Montgomery College	Singleton	Advanced	1100 SAT, 3.5 GPA	Tuition, fees & books	High schools	College	School day	Cohort	College
College Now; CUNY, New York	Singleton, basic skills	Representative	Varied	None	High schools	High school	Before or after school day	Both	Both
College Readiness Program; CCBC	Singleton, basic skills	Middle, low	Teacher referral	None	High schools	High school	School day	Cohort	High school
ESSENCE dual credit; Hagerstown CC	Singleton	Advanced	2.5 GPA; standard	50% tuition; books & fees	High school	High school	School day	Cohort	College
ESSENCE dual enroll; Hagerstown CC	Singleton	Advanced	Pass HSA	50% tuition; books & fees	College	College	After school, weekends	Individual	College
Gateway to College; Montgomery CC	Enhanced comprehensive	At-risk	Joint decision	None	College	Dedicated; college	School day	Both	Both
Health Careers Academy; Iowa CC	Comprehensive/ Tech prep	Technical	Prerequisites: biology & health courses	None but hospital scrubs	High school, college & industry	Both	School day	Cohorts	Both
MCHS, LaGuardia CC; New York	Enhanced comprehensive	Low, at-risk	Joint decision	None	College	Dedicated	School day	Both	Both
Moraine Valley CC; Illinois	Singleton	Advanced	Higher ed discretion	None but AP exam fee	High school	High school	School day	Cohort	Both
Parallel Enrollment Program; CCBC	Singleton	Advanced	Standard	50% tuition; books & fees	College	College	After school, weekends	Individual	College
Project Excel; Daley College, Illinois	Comprehensive/ Tech prep	Advanced	3.0 GPA; standard	None	High school, college, industry	College	School day	Cohort	Both
State of Florida	Singleton	Representative	3.0 GPA and/ or 880 SAT	None	High school, college	Both	Any time	Both	College
State of Washington, Running Start	Singleton, comprehensive	Varied	Higher ed discretion	Books & fees	College or online	College	School day. after school	Both	Both

Legend

Type
- Singleton: High school students enroll in stand-alone college-level coursework, without access to supplemental support services
- Comprehensive: Provides college-level instruction for most, if not all, of the junior and senior years in high school
- Enhanced comprehensive: Provides pre-college, college-prep or college-level coursework combined with career guidance, counseling, mentoring, tutoring, and other services that can help prepare students for college and/or career

Target Audience
- Representative: Intended to be representative of the general student population
- Advanced: Academically advanced students; high achievers
- Middle: Students who have the potential to succeed in college but have not pursued rigorous coursework in high school
- Low: Students who are behind in basic skill development and coursework required for high school graduation, but who have potential to improve
- Technical: Students pursuing career skills; those enrolled in Tech Prep curricula
- At-risk: Students who are at-risk of failure and/or dropping out of high school

Admission Requirements
- Higher ed discretion: Each participating postsecondary institution sets its own admissions requirements
- Joint decision: Secondary and postsecondary partners set criteria and/or select students. Decisions may be based upon student interviews or teacher recommendations, rather than test scores or GPA
- Prerequisites: Students must complete courses, pass tests, or otherwise demonstrate ability to handle college-level material
- Standard: High school students must pass the same admission requirements as regular college applicants
- Teacher referrals: High school teachers recommend students based upon their maturity, basic skills, an potential to improve, regardless of standardized testing
- Varied: Different tracks within the program have different entrance requirements

Cost to Students
- Books: Tuition and fees are free, but students must purchase their own books
- Fees: Tuition is free but students must pay college-related and/or course-specific fees, such as those connected to science lab use, student activities, and applied music
- None: All program costs, including books and fees, are free of charge to students

Primary Location
- College: Most courses taught on the college campus, although a few may be offered at other sites
- Industry: Employers offer practicum or internship sites for Tech Prep students

Primary Faculty
- College: Most faculty are regular full-time or adjunct faculty of the college partner
- High School: Most faculty teaching program-related courses are high school, although they may be approved and/or certified as college adjunct faculty
- Dedicated: Faculty are hired specifically for the named program. They may be hired and paid as full-time college or high school faculty, but their teaching is dedicated to the named program

Format
- Individual: An individual high school student participates in a traditional college course alongside matriculated students
- Cohort: Special sections of courses are presented to groups of high school students who enroll as a cohort, typically without traditional college students in the same class
- Both: Students may attend courses as part of a cohort or enroll individually in college courses

Credits Earned
- Both: Students have an opportunity to earn both high school and college credit, although some students may earn credit from only one of the partners
- College: Students earn credits toward a college degree, or may earn the full associate's degree through the program
- High School: Students earn some high school credits, or may earn the high school diploma through the program

Appendix III

BCPSS Participation in Advanced Placement Program, 1994 – 2006 by number of AP exams taken (number of students taking exams)

School # AP courses	1994 exams (students)	1995 exams (students)	1996 exams (students)	1997 exams (students)	1998 exams (students)	1999 exams (students)	2000 exams (students)	2001 exams (students)	2002 exams (students)	2003 exams (students)	2004 exams (students)	2006* exams (students)	2006 Scoring 3 or higher
Baltimore City College 8	85 (60)	94 (65)	99 (80)	77 (60)	124 (107)	47 (33)	26 (22)	29 (23)	159 (150)	205 (204)	252 (241)	369 (317)	17% 2004:23%
Baltimore Poly technic Inst 13	17 (13)	121 (83)	42 (28)	70 (40)	65 (35)	86 (51)	142 (75)	116 (65)	228 (118)	196 (109)	251 (135)	327 (155)	52% 2004:49%
Patterson 6	3 (3)							11 (11)	18 (18)	88 (66)	88 (67)	106 (87)	18% 2004:16%
Western 9	39 (33)	63 (52)	31 (22)	62 (53)	77 (58)	79 (66)	109 (85)	128 (101)	66 (46)	64 (46)	87 (64)	135 (89)	22% 2004:28%
P L Dunbar 3								19 (19)	10 (10)	18 (18)	47 (37)	33 (28)	3% 2004:2%
Northwestern 2									6 (6)	28 (24)	26 (23)	57 (44)	0 2004: 0
Balt. School for the Arts 3	16 (16)	17 (15)	14 (14)	21 (16)	20 (15)	15 (12)	26 (20)	25 (19)	16 (13)	15 (11)	24 (21)	25 (24)	96% 2004:100%
Mergenthaler			4 (4)								4 (1)	6 (2)	83% 2004: 25%
Lake Clifton										3 (1)		1 (1)	0
Edmondson											2 (1)	2 (2)	0 2004:100%
Southwestern		5 (5)			1 (1)		3 (2)	1 (1)			3 (3)	0	n/a 2004:0
Carver											2 (1)	0	n/a 2004:50%
Douglass											4 (2)	0	n/a 2004:0
TOTAL exams (students)	160 (125)	300 (220)	190 (148)	230 (169)	286 (215)	227 (162)	307 (205)	329 (239)	503 (361)	632 (494)	790 (596)	1061 (749)	29%
% score of 3 or higher	60%	37%	41%	46%	47%	49%	42%	39%	40%	31%	32%	29%	

**Data for 2005 not available*

Appendix IV

2006 Dual Enrollment in BCPSS High Schools

	Spring 2006			Summer 2006			Fall 2006		
School	Number Students	Number Courses	Percent Passing	Number Students	Number Courses	Percent Passing	Number Students	Number Courses	Percent Passing
Academy for College and Career Exploration				11	17	94%			
Baltimore City College	1	1	100%				1	2	
Baltimore Freedom Academy									
Baltimore Polytechnic Institute				4	4	100%	6	6	
Baltimore School for the Arts									
Carver Vocational Technical	21	27	30%	1	2	0	1	2	
Dr. Samuel L. Banks	1	1	100%						
Frederick Douglass	16	18	72%	4	8	63%	1	1	
Paul Laurence Dunbar	5	5	40%	1	2	100%			
Edmondson-Westside									
Forest Park	13	14	64%	3	6	33%	13	16	
Heritage	5	5	0						
Reginald F. Lewis	3	4	50%						
Mergenthaler	2	3	33%						
Northwestern	1	1	0						
Lawrence G. Paquin	4	6	33%				1	1	
Patterson	3	4	100%	4	5	80%	1	2	
Southern									
Southside Academy	16	16	63%						
Southwestern	2	2	50%						
Thurgood Marshall	7	7	29%	7	11	82%			
W.E.B. DuBois	22	22	86%				1	2	
Walbrook	4	5	100%	4	5	60%			
Western	1	1	100%	2	3	100%	3	3	
TOTALS	**127**	**142**	**64%**	**41**	**63**	**76%**	**28**	**35**	