Promising Practices from the Woodrow Wilson Early College Network

Increasing Curriculum Intensity and Scaffolding the College Experience

Engaging students in rigorous learning early on and moving them to higher learning
Living the college experience

STAR (Science, Technology and Research) Early College High School – Brooklyn College

School Type: Public School District
Number of Students: 436
Principal: Henrietta Coursey

School Location: Brooklyn, NY
Level: 6, 9-12

An Early College environment blends high school and college for a more seamless educational transition for students, with the goal of increasing their access to and success in college. The partnership between Brooklyn College and STAR Early College High School created a *Transition Plan* to convert this objective into school practice.

The plan begins with a pre-ninth grade orientation and summer bridge; offers Friday workshop seminars, six-week theme seminars, specialized tutorials, and summer bridge courses; and culminates in credit-bearing college course taking. Supports are tailored to the intensity of the academic experience and to individual student needs throughout every element of the *Transition Plan*.

Throughout, STAR students are introduced to college culture at the same time that they are prepared academically for college. They are welcomed on Brooklyn College's campus from the beginning, they become increasingly familiar with campus facilities and learning resources, and they gain first-hand knowledge of how to navigate college culture.

> *I think that we're definitely increasing their chance of succeeding at college. Now, I can't prove that. But I can say that they'll be less afraid of it. They'll be more inclined to do it, because they've known all these people that are in college, especially if their family members haven't been in college. They know how to use the library. They're more used to a more challenging set of expectations.* –STAR science teacher

School Context

Science, Technology and Research (STAR) Early College High School, located in Brooklyn, NY at the historic Erasmus Hall campus opened in 2003 and currently serves 371 students in grades nine through twelve and 65 students in sixth grade. The school will add seventh and eighth grades in 2007 and 2008. Over 80% of the student population at STAR is African American, primarily of Caribbean descent. Nearly 10% of the students is Hispanic/Latino, 2.3% is Asian American/Pacific Islander, 1.1% is White, 0.5% is American Indian/Alaskan

Native, and 5% is either multi-racial or the student's race/ethnicity is unknown. Over half of the students (54%) are eligible for free and reduced lunch programs.

This small, public, neighborhood school resulted from a partnership between Brooklyn College, a four-year liberal arts campus of the City University of New York (CUNY), the CUNY Gateway Institute for Pre-College Education, and the New York City Department of Education. The Early College partnership is supported by the Woodrow Wilson National Fellowship Foundation (WW) as part of the Bill & Melinda Gates Foundation's Early College High School Initiative. The following statement highlights the mission of the partnership:

> ***STAR Early College School*** *strives to promote and maintain a nurturing, rigorously challenging and stimulating college oriented learning environment. STAR prepares all students to take college courses at Brooklyn College as part of the early college experience and equips students to pursue professional careers in science, mathematics, technology and related health careers in college and beyond. Our learning community helps students to achieve the core values of* ***STAR: S****triving for* ***s****uccess,* ***T****olerance in a multicultural society,* ***A****cademic honesty and* ***R****esponsibility for self and others.*

The design principles developed by the partnership focus on (1) power of the collaboration; (2) power of the site; (3) teaching and learning; (4) student assessment; (5) student support; and (6) professional development.

The Goal: College Ready

Faculty at Brooklyn College and STAR expect students who are ready for college to be able to:

- Shift from thinking there is one right answer to developing their own questions
- Possess disciplinary literacy, including vocabulary, and background knowledge
- Know and meet expectations for assignments, papers, exams, attendance, participation
- Communicate well
- Overcome any fears of intellectual challenge; take risks
- Become used to a more challenging set of expectations

(see Appendix A for a full list of expectations)

This set of expectations synthesizes the cognitive, academic skills, and psychosocial development that faculty in the Early College partnership believe is needed to be successful in college. These college readiness goals have influenced the daily instructional and curricular planning of the Early College as well as the design of the *Transition Plan*.

Some of the college-ready expectations described here have been explicitly incorporated into placement criteria for college courses. Meeting the criteria is determined through teacher recommendations, school records, and assessment tests.[1] With high expectations in place, the Brooklyn College/STAR partnership employs a system of strategies – a *Transition Plan* – to help students meet those expectations.

The Plan

The transition to college is a difficult process for many: first-year students often stumble in their first college semester with academic difficulties, lack of connectedness and belonging, and lowered self-confidence in a new environment. For first-generation college students, the transition to college is often more complex with greater consequences.

The elements of the Brooklyn College/STAR *Transition Plan* start with low-risk activities. The levels of challenge and support change as students advance through their high school career, all in an effort to ease the transition from high school to college.

[1] The Early College program, the Brooklyn College Department of Undergraduate Studies, and Brooklyn College department chairs jointly determined requirements for STAR students enrolling in college-level courses. Students must have a 75% or higher high school average, maintain good attendance and discipline records, obtain a supportive teacher recommendation, and pass the CUNY writing assessment.

Elements of the Transition Plan
Summer Orientation and Bridge
Pre-College Orientation Seminars
Six-Week Enrichment Seminars
University Library Based Research Project
Prep Seminars & Tutoring Support
Summer Immersion/Bridge courses
College Prep course
College Credit courses
Support for under-prepared students

According to the school principal and the Early College director, the *Transition Plan* aims to align curriculum from ninth grade through introductory college courses; build students' skills to support their transition to college; and emphasize literacy across the curriculum (reading, writing, note-taking, verbal communication). At the same time, administrators and faculty convey the importance of being clear and consistent about expectations and standards so that students are prepared for the reality of today's college environment. These goals are consistent with the recommendations from a 2003 Pathways to College Network report on improving college access for low-income students, students of color, and first-generation college students: (1) raise expectations for students; (2) provide academic support; (3) improve social support for students; (4) align the P-16 systems around curriculum, assessment, entrance/exit exams, and expectations; and (5) create quality evaluations to document program effectiveness and shape program improvement decisions.

Elements of the Plan

Summer Orientation and Bridge

Participants	Rising ninth graders
Description	A highly recommended but optional two-week program of math and English/language arts instruction, *Puppetry in Practice,* library orientation, and guidance counseling. The first day is an orientation for parents and students that also includes placement and diagnostic assessments.
Goals	Help students acclimate to the college environment; Review skills that students will need to be successful in the Early College High School

The school principal observes positive benefits of the summer orientation and bridge program as soon as students begin ninth grade:

> *We have achieved what we wanted to achieve with the bridge program, an opportunity for students to learn about the school, to have experiences on the college campus, to build academic readiness and preparation. They get to have some fun through puppetry, and they get to know each other and bond together so that they've already meshed together when they come in September.*

The summer orientation and bridge program is coordinated by the department of continuing education at Brooklyn College which runs several summer youth programs. The program has been successful, according to the associate dean of continuing education, due to the commitment of the faculty facilitating the sessions because they are especially responsive to students' needs. Situated on the college campus, students see first-hand what it means to be in college and they have direct interaction with college students. One of the most important aspects of the program is that students connect with peers before the school year begins. Despite efforts to encourage more students to attend, however, only about half of each incoming ninth grade class tends to participate in this non-mandatory program. To extend similar benefits to students that don't attend, the school has implemented a set of activities during the first two weeks of the school year, including assessment, guidance counseling, college campus tours, and school-wide community building events.

Pre-College Orientation Seminars

Participants	Ninth graders
Description	Two-hour seminars on Friday mornings at Brooklyn College. Students are *"exposed to various campus facilities, including the library and laboratories… under the direct supervision of Brooklyn College faculty and engage in experiences that allow them to demonstrate and connect abstract concepts with hands-on work."* (2004-05 Annual Report)
Goals	*"Gradually introduce students to more challenging classroom settings and expectations;"* Provide the "*opportunity to see their high school courses in practice; Introduce students to academic subjects that they may not have been aware of previously.*" (2004-05 Annual Report)

STAR students – many of whom start ninth grade scoring below grade level in reading, writing, and math – need to learn to think differently and think about learning differently in order to develop college ready knowledge and skills. All STAR students participate in several pre-college orientation seminars throughout the first semester of their ninth grade to help them with that transformation.

> *I think one thing they get is a confidence and comfort level that they wouldn't have otherwise. They come to me from middle school, and they expect to be told exactly everything to do. We start to try to teach them how to develop their own questions. And then with their exposure to the college faculty and the college environment through the [seminars], they realize… the [college faculty member] does not know the answer that we're going to come up with. That's really hard I think for a lot of them, because there's a lot of insecurity about just getting the right answer…. It's just a very different environment…. I think that we're definitely increasing their chance of succeeding at college…. They're more used to a more challenging set of expectations.* –STAR science teacher

Pre-college orientation seminars not only introduce students to college-level expectations, they also ease college faculty into the Early College program. A one-time workshop is low-risk involvement especially for those with little or no experience working with high school students. The commitment is minimal, but the experience directly introduces faculty members to the Early College program goals and may spark their interest in becoming more involved. Some faculty members who started by facilitating a pre-college orientation seminar have become interested in conducting six-week enrichment seminars, mentoring high school faculty, and teaching college courses to Early College students.

Six-Week Enrichment Seminars

Participants	Ninth and tenth graders
Description	*"These investigative seminars are directly linked to specific high school Regents[2] courses and are designed to give students more in-depth experience investigating their focus area, while reinforcing the content."* (2004-05 Annual Report)
Goals	*"Gradually introduce students to more challenging classroom settings and expectations;"* Provide the *"opportunity to see their high school courses in practice"* (2004-05 Annual Report)

The six-week enrichment seminars held on Friday mornings at Brooklyn College allow students to revisit a topic regularly, so that they deeply engage in an issue, think critically through multiple aspects, and interact regularly with college faculty on academic activities. A social studies teacher at STAR described the layers of benefits for students:

> *They had that piece, with the college professor giving them a little dose, a little taste of what college is like, and I think it captures the interest of these students. In addition to that, they are treated not as if they are in school. I think the mere fact that they are in a*

[2] New York State requires that all students pass Regents exams in English, Mathematics, Science, and Social Studies in order to graduate from high school. The exams are aligned to content learning standards established by the State Board of Regents and the core curricula issued by the State Education Department.

different environment, they know the expectations are high, and they feel the responsibility of college students, some of them act quite more mature than you will see them acting here [on the high school campus].

Seminar topics have included "Bones to Behavior" (anthropology), human anatomy, and archaeology. A high school teacher and college faculty member co-develop a syllabus for the seminar. The high school class then meets at Brooklyn College for six sessions that are co-taught by the college faculty member and the STAR teacher.

University Library Based Research Project

Participants	Ninth and tenth graders
Description	A project on national identity addressing the influences of geography, politics, economy and society in post-colonial West Indian/Caribbean nations. Ninth graders search through Brooklyn College library databases to find print resources, research their topic, develop a response to the research questions, and write group papers. The project will expand in 2007-08 for tenth graders to research how Caribbean identity is affected by immigration to the United States.
Goals	Provide a first-hand experience in using the library to "*research a challenging historical question;*" Build skills in writing a research paper, including note-taking, paraphrasing, creating outlines, and citing references; Convey strategies for identifying relevant and factual print sources, and making use of primary and secondary sources.

A new addition to the transition plan, the university library based research project was completed by ninth grade students in 2006-07 and will expand into a tenth grade project in 2007-08. The project grew out of a pre-college orientation seminar held in previous years that introduced students to the college library facilities. A faculty member from the Brooklyn College library and four ninth grade English and social studies faculty along with the school's literacy coach and principal collaborated in its development and implementation. Students work together – reinforced by high levels of teacher support – to develop a research paper from start (searching for sources) to finish (writing final versions of the papers). An important feature is that students use print sources only. The only web resource permitted is the college's online catalog to identify print sources available in the library.

It challenged the kids to figure out how to do Boolean searches. And because we had so many teachers and professors helping, we could work through that process, but it was hard…. They really got to explore what it's like to be in the library. For me, that was the most rewarding part, because the kids were seeing how a college library is organized, and they were pulling books [from the shelves], and it was great in that way. –STAR literacy coach

Importantly, the project blends state standards for high school curriculum and the knowledge and skills needed to write an effective college-level research paper. The assignment's guiding questions help students address the historical themes (geography, politics, economy, and society) of the New York State Regents. At the same time, students become practical users of a college's resources and facilities – the library – to investigate an issue in-depth, think critically about the relationship between history and identity, develop a cohesive argument based on evidence, and express their own voice through writing that adheres to conventions and follows a clear format. It is also interdisciplinary in that students read literature as well as historical documents, learn about creative writing and historical themes, and explore the topic of identity through both literary and historical frames.

Preparatory Seminars and Tutoring Support

Participants	Tenth to twelfth graders
Description	Structured reviews of high school Regents courses and tutoring for college courses.
Goals	Prepare students for Regents exams and future college-credit courses; Support and reinforce learning based on students' needs

Continuing in the tradition of Friday morning seminars at Brooklyn College, the preparatory seminars and tutorials offer two

hour reviews facilitated by Brooklyn College faculty and staff and supported by Brooklyn College undergraduate and graduate students. For example, a Brooklyn College chemistry professor conducts a review and practice seminar to help students master their high school chemistry material. Since this faculty member has worked directly with STAR's chemistry teachers on curriculum and instruction, his familiarity with the material enabled him to develop review curriculum and materials. Students rotate in and out of the reviews to keep the class size small but allow all students to benefit from the faculty-student interaction and the additional support. The extra attention seems to be paying off in Regents exam results: almost 80% of students passed the exam in 2005-06.

When STAR students take college courses, dedicated tutoring by Brooklyn College undergraduates is made available as well. For example, in the spirit of supplemental instruction, the Early College director hires a tutor to attend the college-level Chemistry 1.1 course; this tutor then provides direct tutoring support to the Early College students enrolled in that course. Many tutors are recruited through the Alliance for Minority Participation and the National Black Science Students Organization.

Summer Immersion and Bridge Courses

Participants	Rising eleventh and twelfth graders. Students must apply to the Early College Summer Program; they are selected based on eligibility/placement assessments for Brooklyn College courses and interest in the course topic.
Description	Bridge courses are designed for students who will enroll in college courses in the next school year to fill gaps in content and skills between high school courses and introductory college courses. Immersion courses are designed to offer college-credit bearing experiences via experiential learning.
Goals	Prepare students with the knowledge, skills, and attitudes needed to be successful in specific college-credit courses

The Brooklyn College/STAR partnership takes advantage of the summer months to support the transition to college-level learning. Immersion and bridge courses for college credit that have been developed over the past several years include: Essay Writing (1 cr.), Laboratory Methods (1 cr.), Chemistry Bridge (1 cr.), and Archaeology Field School (3 cr.).

A chemistry faculty member developed the chemistry bridge to fill the gap between the high school Regents curriculum and Brooklyn College's introductory chemistry course.

> *As far as science goes, it's a huge jump to chemistry. So, I wrote a summer preparatory course…. They are going into Chemistry 1.1; I teach Chem 1.1 so I knew the whole curriculum…. I prepared the kind of problem solving, the kind of vocabulary, the kind of sequence they would get in Chem 1.1…. We dovetailed it.* –Brooklyn College chemistry faculty member

Each summer, some STAR students participate in an archaeology field school, co-taught by a Brooklyn College archaeology professor and a STAR science teacher. Brooklyn College undergraduates serve as tutors and mentors. STAR students have worked alongside undergraduates on digs at local historical sites: the Erasmus campus site of STAR, the Lott House, and Fort Greene Park.

> *So we had both groups of students in one group, digging together, and that allowed us to have two or three college students with each two, three, four high school kids. It provided mentoring for the students, it provided role models for them, it provided competition for them, and it broke up their own groups, their own cliques. I thought that both the college and the high school kids benefited by it…. They can see that this is the way that college kids actually work in college, and this is what they do, this is what they read, and this is what they write, this is the kind of exam that is expected of them, this is the kind of paper that's expected of them.* – Brooklyn College archaeology faculty member

Students completing the archaeology field school literally get their hands dirty experiencing college-level learning in a setting different from the typical lecture-style

introductory science course. They investigate, discover, and theorize out in the field. They must collaborate with others in order to be successful.

College Courses—3-5 credits each

Participants	Eleventh and twelfth graders. Spanish courses are open to any eligible student ninth to twelfth grade; Students may enroll in college courses before eleventh grade based on readiness and teacher/principal recommendations
Description	Students apply to enroll in Early College courses for college credit; all who meet course placement criteria established by Brooklyn College, CUNY, and STAR are enrolled in college courses. Brooklyn College faculty and STAR teachers who meet a department's requirements for adjunct status teach the courses. All college courses are taught on Brooklyn College's campus.
Goals	Give students the opportunity to earn transferable college credits; Offer students a first-hand experience with college-level expectations for learning; Provide a rigorous curriculum sequence that will prepare students for college access and success

Enrollment in college-level courses is the culminating experience of the *Transition Plan* scaffold, where students apply what they have learned thus far, experience growth through the challenge and support of their Early College coursework, and continue to build their capacity for postsecondary success.

The Brooklyn College/STAR partnership developed an academic plan providing students the opportunity to earn up to 30 college credits before graduating from high school.[3] The academic plan (Appendix B) details the full course scope and sequence for the school as well as subject areas and course titles for college coursework. The academic plan is always a work in progress as the partnership evaluates its program and as new course options become available.

College departments determine the best mode of delivery for their college courses; as a result, a variety of formats are offered. All STAR students take dual enrollment courses that provide high school and college-level credit. Courses in geology and music have been offered in this format. Spanish, English 1.11 and English 1.12, and Chemistry 1.1 have been offered as stretch courses in which students complete the requirements for the one-semester course over a full academic year. However, English 1.11-1.12 was recently re-evaluated. The Early College director commented on student performance in the course:

> *They've done fantastic, because they come in doing the assessment test, and they're scoring as well or better than the entering college freshmen on the assessment test.*

The chair of the Brooklyn College English department determined that STAR students in the stretch course performed "*comparatively well*," as reflected in their end-of-course grades, and decided to enroll STAR students in the one-semester version of the course beginning in fall 2006. In addition to the cost benefits of this change, it also helps students move to more advanced coursework in English and allows them potentially to accumulate a greater number of college credits.

Early College students take both cohort and integrated college courses (also called waiver courses). Cohort courses are planned specifically for the STAR Early College program and enroll Early College students only. Some students enroll in integrated courses – courses in the Brooklyn College catalog available to the general student population; no more than 10 students are enrolled in any one integrated course section with other Brooklyn College undergraduates. For some courses, a high school teacher facilitates a workshop at the high school to reinforce concepts in the college course.

[3] Some STAR Early College students have earned more than 30 college credits during high school.

College Preparatory Course

Participants	Eleventh and twelfth graders enrolled in credit-bearing college courses
Description	Non-credit course reviewing basic academic skills, tutoring, college and career search and admissions/financial aid.
Goals	Provide students with information to promote and support academic success in college courses

The college preparatory course is a vehicle for providing academic and college-going support to students. The Early College director coordinates the course and facilitates many of its sessions. She brings in experts from around the campus to help make the course relevant, practical, and effective. For example, the staff from the student development and counseling division at Brooklyn College discusses time management and study skills; faculty members from the English department explain plagiarism; someone from the undergraduate dean's office introduces college ethics; and a colleague at the CUNY Gateway Institute for Pre-College Education has been involved in coordinating and facilitating some sessions. The course also focuses students on building their high school portfolio in preparation for applying to college. Early College students interview Brooklyn College undergraduates and professionals in careers of interest to them. In the eleventh grade, students become involved in developing course topics by raising issues they want to discuss. For twelfth graders, the admissions and financial aid offices and Brooklyn College undergraduates guide students about the application process.

Supports for Under-prepared Students

Participants	Ninth to twelfth graders
Description	*"Resources for supporting the underserved population at STAR are provided both at the high school and college levels."* (2004-05 Annual Report) Supports are provided based on learning needs and personal challenges.
Goals	Help students meet the expectations of a demanding high school curriculum; Prepare students academically and personally so they may enroll and be successful in college; Provide wrap-around services that address academic, social, and emotional needs

Even with all of the support structures incorporated into the elements of the *Transition Plan*, many students struggle. Specific services provided to those students who are under-prepared and struggling include an after-school study center that includes homework help and tutoring in each subject, a Saturday Regents Prep Academy, tutoring organized by the Brooklyn College Community Partnership for the entire Erasmus campus, double periods of math and/or English, and a student support team. The school's approach addresses the needs of the whole student – attending to both learning and personal needs.

> *There are children who come here, and for some reason, there was some lack of preparation somewhere along the line. When students are bored in the classroom, or act out, or show impatience, they are crying out for help. In one instance, these two young men had difficulty reading; literacy problems. Writing was not a habit to them. Somehow, you have to work with them: be mindful of the reality, the conditions of the students' [lives]. Get to know them. Get to know the parents, if possible the homes. Get to know some of their wants, let them know that they've got a friend on the inside, somebody they can talk to. Then they're going to tell you about their plans, and their confusions, and anxieties. They are still teenagers, you know! And then you can help them, because they want somebody.*
> –STAR social studies teacher

Supporting Programs

Other aspects of the Brooklyn College/ STAR partnership weave in and out of the *Transition Plan.* These programs also build STAR students' cognitive, academic skills, and psychosocial development with college readiness as the goal.

STEP Program

The Brooklyn College Science and Technology Entry Program (STEP) is organized by Brooklyn College science faculty in partnership with STAR and Midwood High

School (also in Brooklyn). The program provides hands-on experiences in the sciences along with academic support for economically disadvantaged students and students of color from Brooklyn: *"Our goal is to give students the opportunity to see for themselves how successful they can be in the sciences, thus encouraging them to consider continuing in the field of science and technology."* (STEP brochure)

Between 10 and 20 STAR students are admitted to the program in the ninth grade; the program hosts about 50 STAR ninth through twelfth grade students each year. They participate in peer mentoring by Brooklyn College undergraduates, college and career development workshops and seminars, prep courses including the lab methods summer bridge course offered as part of the *Transition Plan*, student shadowing opportunities, a field lab at Fire Island National Seashore led by a STAR science teacher, and college biology, chemistry, and math courses. STEP students also have the opportunity to partner with a Brooklyn College faculty member in their research labs and to present their research at science fairs and conferences.

Gateway Institute

In addition to its role in planning STAR Early College High School and supporting the college preparatory course, the Gateway Institute provides academic enrichment opportunities for students, including internships in the sciences, research projects for ninth graders at a local DNA lab, information about pre-college summer programs, and college tours and fairs. The Gateway Institute also provides professional development in science, math, and literacy for STAR faculty.

Design Features

Faculty dialogue and collaboration

At STAR Early College High School, college faculty members are fully engaged in the life of the school. Faculty collaboration is central to the *Transition Plan*. Each component of the Brooklyn College/STAR *Transition Plan* was created through college and high school faculty collaboration and many activities are co-facilitated.

The partnership must be organized both formally and informally in ways that maintain a consistent level of collaboration. For example, an advisory committee with high school and college representatives met monthly in the first two years and twice each semester in the third and fourth years. Curriculum work groups of high school and college faculty from specific subject areas have met regularly to establish a sequence of courses and develop curriculum. In addition, the partnership hosts a retreat every summer for high school and college staff and faculty to map out the vision of the school and plan future educational activities. A main goal of the retreats is for Brooklyn College and STAR faculty to get to know each other and learn about each other's work.

Several members of the Brooklyn College faculty offer on-site mentoring, including instructional and curriculum support, to STAR teachers. The Early College director identifies and helps establish the pairing of faculty. Some of these college faculty members note that the Early College director is particularly savvy at matching faculty who work well together. As a result, individual faculty partnerships have flourished. The Brooklyn College provost was instrumental in starting STAR Early College High School and developing Brooklyn College's capacity to partner with a new school. She continues to support faculty and departments involved in the Early College. In addition, leadership from school administrators is necessary to ensure that each element is consistent with the vision of the whole, so that a school culture focused on Early College is realized.

The college campus and the culture of college

Clearly, the *Transition Plan* is not simply academic in focus. Its educational components are designed to help students develop a sense of belonging on the college campus by way of students accessing campus facilities and learning resources. In fact, Brooklyn College hosts most *Transition Plan* activities. With every experience, each student becomes an insider, learning the ins and outs of higher education, building knowledge of how college "works." By starting with low-risk activities and gradually

building the level of challenge, it is hoped that students gain a sense of confidence in their ability to "do" college and a resiliency to keep pushing forward when faced with challenging academic tasks. Through hands-on experiences alongside college faculty, students learn first-hand how to apply their knowledge and skills to new and challenging situations. They engage in higher-order thinking, learn to question, and develop their own academic voice by engaging in ideas and building arguments backed by evidence.

Student Outcomes

The Brooklyn College/STAR partnership has produced positive outcomes for students in terms of state exit exams (Regents), college credit enrollment and accumulation of credits, high school graduation rates, and college acceptances. In 2005-06, the school had pass rates of 80% or higher on the English/Language Arts, Spanish, Global History, US History, Math A, Math B, and Living Environment Regents exams. The highest pass rates were 100% for Spanish and 99% for Math A.

Many students at STAR are successfully completing a sequence of college courses for credit while in high school. Approximately 60% of the class of 2007, the school's first graduating class, has enrolled in Brooklyn College courses while in high school. On average, these students earned about 20 credits before graduation. The class of 2008 is progressing to reach similar outcomes.

Overwhelmingly, STAR students have been successful in college courses. In 2005-06, most students received an A, B, or C in their college courses. In fact, 89% earned an A or B in English 1.11 and 47% earned an A or B in English 1.12. In Political Science 1.51, 75% earned an A or B; this course was co-taught by high school and college faculty in the workshop format. However, smaller percentages of students earned an A or B in waiver courses such as Geology (19%), Art 2.1 (31%), and Art 2.2 (23%).

Graduating seniors from the class of 2007 have been admitted to many colleges, including Brooklyn College, Boston University, Carnegie Mellon University, Cornell University, Dartmouth College, Franklin & Marshall College, Johns Hopkins University, Polytechnic University, and several SUNY and CUNY campuses. They have also received full and partial scholarship awards, including the Gates Millennium, Posse, and New York Times scholarships, as well as awards from individual colleges. The students' post-high school transition to college awaits, and their future achievements are unknown at this time, but it is believed that the *Transition Plan* has set STAR Early College High School students on the path to success in college.

This promising practices brief was based on interviews conducted by Fred Frelow and Kristen Vogt of the Woodrow Wilson National Fellowship Foundation and Anne Newton of Jobs for the Future with faculty and administrators at both STAR Early College High School and Brooklyn College. A companion publication about the Brooklyn College/STAR partnership scaffolding of the college experience for Early College High School students will follow.

Appendix A: College Ready Skills, Attitudes, and Knowledge

Cognitive Development

- Shift from thinking there is one right answer to developing own questions
- Possess disciplinary literacy, including vocabulary, and background knowledge
- Understand math principles and know how to solve problems when material is presented in a different format.
- Develop problem-solving and critical/analytical thinking abilities to engage in difficult tasks, difficult ideas, and sustained projects

Academic Skills Development

- Know and meet expectations for assignments, papers, exams, attendance, participation
- Develop strong research and library skills; understand plagiarism
- Be able to communicate well
- Know how to read a textbook, write outlines
- Practice good study skills and time management
- Work together with peers on group projects and form study groups

Psychosocial Development

- Overcome any fears of intellectual challenge; take risks
- Know and meet expectations for social/interpersonal behavior in collegiate settings by exhibiting patterns of good behavior, such as following directions, being on time
- Be self-directed: Assume responsibility for own learning; know how to learn independently
- Be a participant not a recipient of learning
- Become used to a more challenging set of expectations
- Develop a self-understanding of own emotional, social, and academic needs
- Be able to concentrate and focus on tasks
- Ask for help, don't be afraid to ask questions
- Maintain good physical health
- Build a support network—whether faculty, peers, family—of role models and mentors to learn from them what it takes to be successful in college
- Find supportive environments, whether home, school, or other community spaces, that enable them to study and complete assignments

Appendix B: Science, Technology and Research, (STAR), Early College High School @ Brooklyn College
Academic Plan

Students enrolled at the Science, Technology and Research, (STAR), Early College High School begin to take courses for regular college credit in the 11th grade, with the exception of Spanish, that could begin as early as the 9th grade, for eligible students. Students might be accelerated into college level courses based on readiness and on the recommendation of teachers and/or the Principal.

The chart below outlines the typical course of study for a student enrolled at STAR. All courses offered by the college are **bolded** and *Italicized.*

Dual Enrollment courses, (count for both high school and college credits), are bolded and shaded. These courses are offered **every semester**.

LOTE: Language other than English.

SC – Stretched Course: One semester course offered over two semesters

*** Denotes maximum credits**

Area of Study	9th Grade		10th Grade			**College Credits**	**High School Credits**
	1st Semester	2nd Semester	1st Semester	2nd Semester	Summer		
Support Seminar	Advisory & ***Early College Seminar***	Advisory & ***Early College Seminar***	Advisory & *Early College Seminar*	Advisory & ***Early College Seminar***		-	-
Arts	Art/Tech [1]					-	1
Biology/Living Environment	Biology 1/Living Environment [1]	Biology 2/ Living Environment [1]			***Laboratory Methods***	1	2
Chemistry			Chemistry	Chemistry [2]	***Bridge to Chemistry***	1	2
ELA-English	English 1 [1]	English 2 [1]	English 3 [1]	English 4 [1]	***Writing Skills***	1	4
Foreign Languages	LOTE –Spanish 1 [1]	LOTE –Spanish 2 [1]	LOTE-Spanish 3 [1]	LOTE –Spanish 4 [1]	-	**-**	4
Health & Physical Education	Physical Education 1 [1]	Physical Education 1 [1]	Physical Education 1, [1]	Physical Education, 1, [1]	-	-	4
Mathematics	Math A-Algebra1 [1]	Math A-Algebra 2, [1]	Math A-Algebra 3 [1]	Math B accelerated [1]	-	-	4
Social Studies	Global History 1, [1]	Global History 2, [1]	Global History 3, [1]	Global History 4, [1]	-	**-**	4
Total Credits 9th & 10th Grades					**-**	**3**	25

Appendix B: Science, Technology and Research, (STAR), Early College High School @ Brooklyn College
Academic Plan

Area of Study	11th Grade			12th Grade		College Credits	High School Credits
	1st Semester	2nd Semester	Summer	1st Semester	2nd Semester		
Support Seminar	***College Preparatory Seminar***	***College Preparatory Seminar***		***College Preparatory Seminar***	***College Preparatory Seminar***	-	-
Arts							
Biology/Living Environment					***Biology 3: General Biology, (4.5)***	**4.5**	-
Chemistry	***Chemistry 1.1: General Chemistry lA, (2)***	***Chemistry 1.2: General Chemistry lB, (3.5)***				**5.5**	-
Computer Science				***CIS 1.51: Intro. to Computing, (2)***	***CIS 1.52: Intro. to Computing, (2)***	**4**	-
Economics					Economics, [1]		1
ELA-English	English 5, [1] and ***English 1: English Composition, (3)***	English 6, [1] and ***English 2: Expository Writing, (3)***		***English 6: Literature & Cultural Diversity, (3), [1]***		**9**	3
Foreign Languages	LOTE: Spanish 5 or ***Modern Languages 1.1, (1.5)*** [1]	LOTE: Spanish 6 or ***Modern Languages 1.12, (1.5)*** [1]		***Modern Languages 2.1, (1.5)*** [1]	***Modern Languages 2.12, (1.5)*** [1]	6	4
Health & Physical Education				***Health & Nutrition 6.1: Personal & Comm. Health, (3)*** [1]		3	1
History	U.S. History [1]	U.S. History [1]			***Core 2.2: Shaping of the Modern World, (3)***	3	2
Humanities	***Classics 0.11: Greek & Latin Elements in English, (3)*** ***OR*** ***Core 1.3: Music: Its Language, History and Culture, (3)***					3	1
Mathematics	Math B, [1]	Math B, [1]		***Math 3.11: Thinking Mathematically, (3)*** ***OR*** ***Math 2.9: Pre-Calculus OR Math 3.3: Calculus, (3)***		3	2
Physics	Physics [1]	Physics [1]			**Physics 1: General Physics 1, (5)**	5	2
Social Studies	***Anthropology 1 or 2.2, (3)*** ***OR*** ***Political Science 1.51, (3)*** [1]			***Waiver Course Elective, (3)***		6	1
Elective: Humanities				***Core 1.2: Introduction to Art, (3)*** ***[1]***		3	1
Elective: Science	***Core 3.32: Geology: The Science of Our World, (3), [1]***					3	1
Credits 11th-12th Grades	15.5	8	**0**	18.5	16	58	19

Appendix B: Science, Technology and Research, (STAR), Early College High School @ Brooklyn College
Academic Plan

Grades	9	10	11	12	College	High School
Total Credits	**0**	**0**	**23.5**	**34.5**	**61**	**44**

Appendix B: Science, Technology and Research, (STAR), Early College High School @ Brooklyn College
Academic Plan

Course	High School Credits	College Credits	Dual Enrollment	Concurrent Enrollment	Location		Faculty	
					HS	BC	STAR	BC
Advisory	-	-			X		X	
Art	1	-			X		X	
Biology/Living Environment	2				X		X	
Biology: Laboratory Methods	-	-				X		X
Biology 3		4.5				X		X
Chemistry	2	-			X		X	
Chemistry Bridge	-	-				X		X
Chemistry 1	-	5				X	X	
Chemistry 2	-	5				X		X
Computer Science 1.52	-	4				X		X
Core 3	-	3				X	X	X
College Preparatory Seminar	-	-				X	X	X
Economics	1				X		X	
English 1	1				X		X	
English 2	1				X		X	
English 3	1				X		X	
English 4	1				X		X	
English Skills course	-	-			X			X
English 5/English 1.11	1	1.5	X	X	X	X	X	X
English 6/English 1.12	1	1.5	X	X	X	X	X	X
English 7& 8 /English 2	2	3	X			X		X
Government/Political Science 1.51	1	3	X			X	X	X
History – Global	4				X		X	
History – United States	2				X		X	
Health & Nutrition 6.1	1	3	X			X		X
Humanities – Classics 0.11	-	3				X		X
LOTE – Spanish 1	1	3	X		X	X	X	X
LOTE – Spanish 2	1	3	X		X	X	X	X
LOTE – Spanish 3	1	3	X		X	X	X	X
LOTE – Spanish 4	1				X	X	X	X
LOTE – Spanish 5	1				X	X	X	X
LOTE – Spanish 6	1				X	X	X	X
Math A	3				X		X	
Math B	3				X		X	
Mathematics Bridge	-	-				X		X
Math 3.3 or Core 3.11	-	3				X		X
Music – Core 1.3	1	3	X			X		X
Physical Education	4	-			X		X	
Physics	2	-			X		X	
Science Electives: Core 3.32: Geology or College Science Elective	1	3				X		X
Social Studies Electives: Anthropology 2.2 or 1	1	3	X			X	X	X
Humanities Elective: Core 1.2: Art	1	3	X			X		X
Total	44	60.5						

Location/HS: High School SF: Course Taught by High School Faculty
Location/BC: College Campus BCF: Course Taught by Brooklyn College Faculty

- 33 Dual enrollment credits