Issue Brief: Community College and High School Partnerships
Prepared for: The White House Summit on Community College

Elisabeth Barnett and Katherine Hughes, CCRC

September 2010

Community colleges and high schools are historically very closely linked; in fact, the original community colleges were formed as extensions of secondary schools in the early decades of the twentieth century.[1] Over time, the two have evolved into wholly separate educational systems with distinct missions, funding streams, and curricula. However, there are numerous arenas in which they currently work together that contribute to the national effort to increase college completion rates—an emerging priority given President Obama's goal of returning the United States to its position of having the highest proportion of college graduates in the world by 2020.

In this Brief, we focus on partnerships between community colleges and high schools that may make it more likely for students to complete *three important milestones* on the road to college completion:

1. *Enrollment in college* – In order for students to complete college, they must first enroll. Colleges work with high schools to increase the likelihood that students will view college matriculation as an option.
2. *College readiness at enrollment* – Many students enter college in need of remediation; participation in remedial (also called developmental) education is associated with lower rates of degree completion.[2] Colleges and high schools can work together to increase the number of students who are college-ready upon entry.
3. *Persistence in college* – Students often enter college only to leave before completing a degree, frequently during the first year. Their success can depend on the extent to which they make a smooth transition from high school to college.

There is a broad range of goals and activities among community college–high school partnerships. We have organized the most prominent programs and initiatives into two categories as follows:

- Initiatives designed to provide high school students with *access to existing and regular college resources and offerings,* such as assessments or college courses.
- Programs or activities that partnerships develop together *specifically for high school students* and their needs.

The Brief concludes with a short discussion of policy and funding considerations.

Access to Regular College Resources and Offerings

Outreach and Recruitment (addresses Milestone 1)

Description: Community colleges are frequently involved in active outreach and recruitment efforts in and with local high schools; the main purpose is to foster ties and broaden community awareness of a college's programs and services. Many colleges even help high school students consider a full range of postsecondary options in light of their individual educational and career goals.

Value-added: Students are given help in navigating the often complex process of matriculating into college. This is likely to be especially important for students who have not viewed college as a practical, affordable option, including those who do not have parents who can effectively guide them through the matriculation process.

Population targeted/served: These services are typically offered to any interested high school student. However, they are likely to be most beneficial to students who are less often helped by regular school counselors, i.e., those who have not been on the college track throughout their high school careers.

Evidence of effectiveness: We are not aware of studies measuring the effectiveness of these activities.

Exemplar: The College Connections program run by Houston's Lone Star College System is an example of a multifaceted outreach program in which students are provided help with researching college and career options, as well as assistance with college applications (to any college), placement testing, and acquiring financial aid.

Dual Enrollment (addresses Milestones 1, 2, and 3)

Description: In dual enrollment, high school students are permitted to take college courses and, if they pass them, earn college credit. Sometimes, as in the case of dual credit, students earn both college and high school credit for the same course. Dual enrollment is quite widespread; the most recent national data available show that over 800,000 high school students took a college course in the 2002–03 school year, and almost all two-year public colleges enrolled high school students. Quite a few states have policies that encourage student participation. While most students participate in regular,

stand-alone courses, there are increasingly structured programs available that provide support services in addition to a recommended sequence of courses.

Value-added: Dual enrollment is seen as a means of strengthening preparation for college, encouraging college enrollment, and increasing college persistence. Dual enrollment programs foster collaboration among college faculty and high school teachers that may lead to better alignment of curricula, which should result in better-prepared students. Also, it is hypothesized that early exposure to the college environment and college courses assists students in acclimating to college, academically and socially.

Population targeted/served: Dual enrollment has typically been targeted to more advanced students; indeed, several states have policies that limit student participation based on grade point average (typically, students must have a 3.0 or higher). However, the national and state focus seems to be shifting away from serving those who are already college-bound and moving instead toward the recruitment of disadvantaged, first-generation, or middle-achieving students and others for whom participation could be life-changing. Many states now mandate that all qualifying students have access to dual enrollment, and many also stipulate that college tuition and fees be waived for high school students.

Evidence of effectiveness: There has been little rigorous evidence of effectiveness until recently, and no randomized controlled trials of dual enrollment have been undertaken. Studies conducted by the Community College Research Center (CCRC)[3] of students in Florida and in New York City have found participation in dual enrollment to be positively related to students' likelihood of earning a high school diploma, to college enrollment, to persistence in college, and to higher postsecondary grade point averages. Dual enrollment participants were also more likely to go on to enroll in a four-year institution rather than a community college, perhaps indicating that their early taste of college gave them the skills and confidence to raise their educational aspirations. Importantly, the benefits to dual enrollment were stronger for male and low-income students. Additional research on the City University of New York (CUNY) College Now program, the same program studied by CCRC, also found positive results.[4] In general, studies have found that earning college credits prior to high school graduation reduces time-to-degree and increases the likelihood of graduation.[5]

Exemplar: The City University of New York's College Now program is widely viewed as a leader in dual enrollment, due to its commitment to providing New York City high school students with engaging and supported college experiences. College Now offers a full range of remedial, college preparatory, college credit, and enrichment activities.

<u>Early Assessment (addresses Milestone 2)</u>

Description: Early assessment is the increasingly popular practice of offering college placement tests to students while they are still in high school. Many incoming community college students are unclear about testing and placement policies and practices, are not well prepared to take the placement tests, and are surprised afterward to find that they are

not deemed "college-ready."[6] Early assessment aims to provide information on skills deficiencies well before students begin college. Presumably, high school students who do not do well on the tests can then take steps to improve their preparedness, ultimately pass the tests, and avoid placement into developmental education.

Value-added: Early assessment may have a positive influence on college-readiness as well as persistence in college. By implementing such programs in partnership with community colleges, high school staff may understand better the importance of aligning their curricula with the academic standards of the colleges and/or help students to better prepare for college. It is a national shame that more than half of community college students enroll in at least one remedial course, and many additional students are assigned to remediation but simply never enroll.[7] Remediation has enormous costs to society as well as to individual students who must pay for courses that do not yield college credit. In addition, students who begin college in developmental education have a reduced chance of persisting and earning a college credential. Thus, entering college without need for remediation is one of the most important factors contributing to eventual college completion.

Population targeted/served: Community colleges and high schools may work to target early assessment to particular groups of students, such as those likely to need focused support to become college-ready. Alternatively, they may implement it universally in a college's feeder high schools.

Evidence of effectiveness: The California State University system's Early Assessment Program[8] is just beginning to yield data showing that participation does reduce students' probability of needing remediation by four and six percentage points in math and reading, respectively.[9] Some suggestive evidence comes from El Paso Community College in Texas, which has implemented early assessment as part of a "comprehensive college readiness protocol" for all El Paso area high school students. El Paso's data show that the proportion of incoming students who are college-ready has increased with early assessment, and students placed in developmental education are placing into higher levels.[10]

Exemplar: El Paso Community College, in collaboration with the University of Texas at El Paso and 12 El Paso school districts, has implemented the "college readiness protocol" to improve college readiness. Before graduating from high school, virtually all El Paso area students complete a joint admissions application to both colleges; learn about, prepare for, and take the college placement test; review scores with counselors; and improve their skills and re-test, if necessary. Some students also enroll in a summer bridge program to strengthen their basic skills.

Programs Developed Specifically for High School Students (or Recent Graduates)

CTE pathways (addresses Milestones 1 and 3)

Description: Partnerships between community colleges and high schools have been encouraged through federal and state-funded career-technical education (CTE) programs. Since 1990, federal funds have been set aside for Tech Prep programs as part of the Carl D. Perkins Vocational and Applied Technology Education Act and its re-authorizations. Tech Prep aims to improve student transition from secondary to postsecondary institutions by linking the last two years of high school with the first two years of college through technical programs that include rigorous academic content. Articulation agreements permit some high school students to take courses that allow them to earn college credit. Over 900 Tech Prep partnerships, or consortia, have been created, along with thousands of articulation agreements.[11] Tech Prep has been evolving, with stakeholders now promoting the term "career pathway" to refer to an updated ideal type of Tech Prep, and with the latest Perkins reauthorization defining Tech Prep as a "program of study."

Value-added: Tech Prep and other career pathways programs are designed to create clear, career-oriented programs of study that link high school with college. Their intent is to provide a rigorous academic experience leading to a degree in a career area with strong employment opportunities. Further, they are expected to provide students with a planned sequence of courses that can take the guesswork out of educational planning and lead to higher rates of completion.

Population targeted/served:
Tech Prep was originally proposed in a 1984 book titled *The Neglected Majority*[12] in which it was described as a college transition strategy for middle-achieving students. These days, the population targeted varies considerably, depending on geography, local economic conditions, and the specific career area.

Evidence of effectiveness:
Tech Prep has had a mixed record of effectiveness. An evaluation of eight Tech Prep consortia found that students tended not to benefit from the articulated credits, sometimes because they were unaware that they could earn college credits from their high school Tech Prep coursework.[13] Moreover, an analysis of the 1997 National Longitudinal Survey of Youth (NLSY) showed that participation in Tech Prep programs had a negative effect on college attendance.[14] Another analysis of the NLSY looked separately at Tech Prep students' matriculation to two- and four-year colleges and found that Tech Prep encourages enrollment in the former but reduces enrollment in the latter.[15] Some research has shown that when high school Tech Prep students do transition to college, they graduate more quickly than their non-Tech Prep peers.[16] Rigorous evaluations of state-supported programs are not available.

Exemplar: Sinclair Community College and the Miami Valley Tech Prep Consortium are leaders in Ohio's nationally known College Tech Prep program. Their career pathway in

Engineering Technology is especially notable. The pathway enrolls students who begin taking courses in grade eleven and culminates in either an A.S. degree in Engineering Science or an A.A.S. degree, with a major in one of 16 Engineering and Industrial Technologies Division programs at Sinclair Community College. All degree programs have either dual enrollment or articulation agreements through the baccalaureate degree at a four-year institution.

Summer Bridge Programs (addressing Milestones 1, 2, and 3)

Description: Bridge programs, generally offered in the summer, are intensive experiences that help students, usually recent high school graduates, master the knowledge and skills needed for college success. Some focus on college readiness in reading, writing, or math, while others are designed to provide students with exposure to sciences, sociology, or other areas of study. Most are also intended to introduce students to college norms and expectations. In some cases, opportunities are offered for students to earn college credit. These programs exist nationally and are typically funded by the state or federal government, grant funds, or local colleges.

Value-added: Summer bridge programs have the potential to help students enter college without the need for remediation, especially when they are already close to being college-ready. The programs offer accelerated, focused learning opportunities that can allow students to place directly into college-level courses. Further, they can smooth the transition into college by helping students learn how to navigate college systems and become comfortable with college faculty, staff, and other students.

Population targeted/served: Summer bridge programs are generally targeted to students interested in attending college, but who face barriers to success. Many programs explicitly recruit students whose parents have not attended college (first-generation students), while others are designed for groups traditionally underrepresented in college. Others are designed for students who are underprepared in math, reading, or writing, and are thus likely to place into developmental education.

Evidence of effectiveness: The limited research that has followed students as they enter college after participating in a summer bridge program has found positive student outcomes. Students attending summer bridge programs have been found to have higher retention rates than comparison students.[17] In addition, research suggests that underprepared students who participate show improvement in their academic performance. An evaluation of four summer bridge programs in New York City colleges found that program participation was positively related to academic performance.[18] In another study, the lowest performing cohort of students in a bridge program were 10% more likely that their non-participating peers to successfully pass their courses.[19]

Exemplar: St. Philips College, one of the Alamo Colleges in San Antonio, has offered the Fresh X program since 2003. This Hispanic-serving institution targets first-generation Latino students and provides them with opportunities to improve their skills in math and

English. They also participate in a short "student success" course for which they receive college credit.

Early and Middle College High Schools (addressing Milestones 1, 2, and 3)

Description: Early and middle college high schools are small high schools created by a partnering school district and a postsecondary institution, most often a community college. They target students traditionally underserved in college and encourage them to take college courses while still enrolled in high school. Early college high schools are explicitly designed to offer students the opportunity to graduate high school with one to two years of college credit earned, or even an associate degree. Middle college high schools have a similar design, but place less emphasis on college course-taking. About 200 early college high schools have been created through funding from the Bill & Melinda Gates Foundation, while numerous other middle and early college high schools have emerged with other sources of support. In all cases, these schools are expected to become financially self-sufficient over the long term.

Value-added: Both early and middle college high schools are committed to assisting groups traditionally underserved in college. By providing a set of activities that explicitly prepares students for college and offering support during their participation in initial college courses, early and middle college high schools help students learn how to be successful college students.

Population targeted/served: Students in early college high schools initially funded by the Gates Foundation serve large numbers of students of color. In addition, many are first-generation students, speakers of English as a second language, and low-income students. About 42,000 students were enrolled in these schools in 2008–09.[20]

Evidence of effectiveness: Experimental research by the SERVE Center found that early college students in North Carolina are more likely to be making progress toward college readiness than other similar students.[21] The study also found little or no achievement gap between minority and non-minority students in early colleges. Data from the early college students in schools funded by the Gates Foundation also show that traditionally underserved males of color do as well as their female and white male peers, thus reversing a national trend. Early college students associated with the Middle College National Consortium finish 12th grade with an average of 27 college credits earned.[22]

Exemplar: The Middle College High School at Contra Costa College is a highly acclaimed middle-early college high school. In 2008, 48% of graduating students had earned both a high school diploma and an associate degree. The average number of college credits earned by their graduates was 50. One reason for their success is the development of supports to assist students in the transition from high school to college. With assistance from the Middle College National Consortium, structures have been created that reach down to ninth grade to prepare students for, and then support them as they undertake, challenging college courses.

Policy and Funding Considerations

Federal and state policies have a major influence on the development of the programs and practices discussed here. There are three key ways in which the policy environment is influential, separately or in combination: 1) program or strategy creation, 2) provision of funding, and 3) regulations which facilitate or hinder these kinds of initiatives. In general, these initiatives grow when institutions are provided with access to funds or other incentives to create them; they are hindered when intentional or unintentional barriers to student participation are created.

Tech Prep is an example of a *federally created* initiative that has been carried out, in varied forms, throughout the U.S. The original legislation provided guidelines for its development as well as a multi-year funding stream. In addition, states developed their own rules governing these programs and in some cases created complementary initiatives. Other programs, such as dual enrollment, are mainly influenced by *state policies*, which determine funding streams, student eligibility requirements, and sometimes quality standards. In states with strong dual enrollment programs, both high schools and colleges typically receive public funds when high school students enroll in college. In other cases, such as bridge programs and early assessment options, *local policies* are the most influential.

Policymakers often grapple with questions on whether to invest scarce resources into the kinds of initiatives discussed here. While it is hard to state conclusively that any of these are cost-effective, some may be more so than others. The first set of initiatives—those that offer students *access to regular college resources and offerings*—are likely to be low in cost because they involve expanding access to existing resources. The second set of initiatives—those *developed specifically for high school students*—may be more costly as they require dedicated funds for their development and implementation. To the extent that they reduce the time to a college degree, however, their benefits may outweigh their costs.

Endnotes

[1] Cohen, A. M. & Brawer, F.B. (1996). *The American community college.* San Francisco, CA: Jossey-Bass.
[2]Attewell, P., Lavin, D., Domina, T., & Levey, T. (2006). New evidence on college remediation. *Journal of Higher Education, 77*(5), 886–924.
[3] Karp, M. M., Calcagno, J. C., Hughes, K. L., Jeong, D. W., & Bailey, T. (2007). *The postsecondary achievement of participants in dual enrollment: An analysis of student outcomes in two states.* St. Paul, MN: National Research Center for Career and Technical Education (NRCCTE), University of Minnesota.
[4] Michalowski, S. (2007). *Positive effects associated with College Now participation for students from New York City high schools: Fall 2003 first-time freshman cohort.* New York, NY: CUNY Collaborative Programs, Office of Academic Affairs.
[5] Adelman, C. (2006). *The toolbox revisited: Paths to degree completion from high school through college.* Washington, DC: U.S. Department of Education. Retrieved from: http://www.ed.gov/rschstat/research/pubs/toolboxrevisit/toolbox.pdf
Swanson, J. (2008). *An analysis of the impact of high school dual enrollment course participation on post-secondary academic success, persistence and degree completion*. Iowa City, IA: Institute for Research and Policy Acceleration at the Belin-Blank Center for Gifted Education, University of

Iowa. Retrieved from: http://www.nacep.org/confdownloads/swanson_executive_summary.pdf

[6] Nodine, T., Bracco, K. R., & Venezia, A. (forthcoming). *One shot deal: Students' perceptions of assessment and course placement at the California community colleges*. San Francisco, CA: WestEd.

Behringer, L. B. (2009). *Remedial education at the community college: A study of student sensemaking* (Doctoral dissertation). New York University, Steinhardt School of Culture, Education, and Human Development.

Safran, S., & Visher, M. G. (forthcoming). *Case studies of three community colleges: The policy and practice of assessing and placing students in developmental education courses* (Working Paper). New York, NY: National Center for Postsecondary Research and MDRC.

[7] Bailey, T. (2009). Challenge and opportunity: Rethinking the role and function of developmental education in community college. *New Directions for Community Colleges, 145*, 11–30.

Bailey, T., Jeong, D. W., & Cho, S.-W. (2010). Referral, enrollment, and completion in developmental education sequences in community colleges. *Economics of Education Review, 29*(2), 255–270.

[8] The California State University's (CSU) Early Assessment Program (EAP) is an example of a statewide effort; while student participation is optional, the program is available to all since the assessment component consists of additional questions added to the mandatory California Standards Tests in eleventh grade English and math. Students who satisfactorily complete the additional test items are exempted from the CSU placement exam and remedial coursework; those who do not are directed to courses and other resources to improve their college readiness and are required to take the college placement exam. As of 2010, students can also release their scores to the California Community Colleges; these colleges are in the process of reviewing whether the EAP is a valid predictor of success for their campuses.

[9] Howell, J. S., Kurlaender, M., & Grodsky, E. (2010). Postsecondary preparation and remediation: Examining the effect of the early assessment program at California State University. *Journal of Policy Analysis and Management.* Advanced online publication. doi: 10.1002/pam.20526

[10] Kerrigan, M. R. & Slater, D. (2010). *Collaborating to create change: How El Paso Community College improved the readiness of its incoming students through Achieving the Dream*. New York, NY: Community College Research Center, Teachers College, Columbia University; and MDRC.

[11] Hull, D. (2005). Career pathways: Education with a purpose. In D. Hull (Ed.), *Career pathways: Education with a purpose* (pp. 1–22). Waco, TX: CORD.

[12] Parnell, D. (1986). *The neglected majority.* Washington, DC: Community College Press.

[13] Bragg, D. D. (2001). *Promising outcomes for tech-prep participants in eight local consortia: A summary of initial results.* St. Paul, MN: National Research Center for Career and Technical Education (NRCCTE), University of Minnesota.

[14] Neumark, D., & Rothstein, D. (2003). *School-to-career programs and transitions to employment and higher education.* San Francisco, CA: The Public Policy Institute of California.

[15] Cellini, S.R. (2006). Smoothing the transition to college? The effect of Tech-Prep programs on educational attainment. *Economics of Education Review, 25*(4), 394–411.

[16] Sweat, I. J., & Fenster, M. J. (2005, April). *The effect of tech prep on student progress toward graduation.* Paper presented at the annual meeting of the American Educational Research Association, Montreal, Quebec.

[17] Ackermann, S. P. (1990). *The benefits of summer bridge programs for underrepresented and low-income students*. Paper presented at the annual meeting of the American Education Research Association, Boston, MA.

Garcia, P. (1991). Summer bridge: Improving retention rates for underprepared students. *Journal of Freshman Year Experience, 3(2),* 91–105.

Myers, C., & Drevlow, S. (1982, March). *Summer bridge program: A dropout intervention program for minority and low-income students at the University of California, San Diego.* Paper presented at the annual meeting of the American Education Research Association, New York, NY.

Santa Rita, E., & Bacote, J. B. (1997). The benefits of college discovery prefreshman summer program for minority and low-income students. *College Student Journal*, *31,* 161–173.

[18] Bengis, L. et al. (1991). *SEEK and college discovery summer programs: Prefreshman, English-as-a-second language, postfreshman, and science mathematics & technology institutes, 1990 evaluation report*. New York, NY: City University of New York, Project SEEK.

[19] Navarro, J. D. (2007). *Digital bridge academy: Program overview.* Watsonville, CA: Cabrillo College.

[20] Hoffman N., & Webb, M. (2009, June 11). Early-college high school: Modest experiment or national movement? *Education Week*.
[21] Edmunds, J., Bernstein, L., et al. (2009). *IES poster presentation: The study of the efficacy of North Carolina's Learn and Earn early college high school model—Summary of early results.* Durham, NC: University of North Carolina.
[22] Kim, J., & Barnett, E. (2009). *2007-08 MCNC early college high school students: College coursework participation and performance* (NCREST Brief). New York, NY: National Center for Restructuring Education, Schools, and Teaching (NCREST), Teachers College, Columbia University.